

Cummins **Onan**



Parts Manual

Generator Set

HDKBP (Spec A–B)

HDKBR (Spec A–B)

HDKBV (Spec A–B)

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Safety Precautions

The following symbols are used in Cummins Power Generation manuals to alert users to the potentially dangerous conditions relating to maintenance of equipment and replacement of parts. Please read and observe.



This symbol warns of immediate hazards which will result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or product or property damage.

Product Safety Precautions

Before operating the generator set, read the manuals and become familiar with them and the equipment. Safe and efficient operation can be achieved only if the equipment is properly operated and maintained. Many accidents are caused by failure to follow fundamental rules and precautions.



Note:

It is in the Operator's interest to read and understand all Health and Safety information together with all Warnings and Cautions contained within the documentation relevant to the generator set, its operation and daily maintenance.



Improper operation and maintenance can lead to severe personal injury or loss of life and property by fire, electrocution, mechanical breakdown or exhaust gas asphyxiation. Read and follow all safety precautions in the health and safety manual 0908–0110.



Service and repair of Cummins Power Generation equipment must be performed by trained, experienced personnel only. Improper service, repair or replacement of parts may result in damage to equipment & property, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.



Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.



Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!



Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives or using solvents take all necessary precautions not to ingest, breathe the fumes or contact the liquids. Use adequate ventilation and wear protective gloves, masks and protective clothing!

About This Manual

This manual applies to the generator models HDKBL, HDKBM and HDKBN. Parts illustrations are arranged in groups relating to their position and function on the generator set. Each part illustrated is identified by a reference number corresponding to the list of part numbers in the accompanying table.

Engine and alternator parts that have been modified or added by Cummins Power Generation are identified in this catalogue. Contact your nearest authorized distributor for assistance in ordering replacement parts. All other replacement parts must be ordered from the engine/alternator manufacturer by referring to the item nameplate and supplying all available information.

Generator Set Data Table

Model and Specification	Electrical Data					Battery Voltage
	Watts	Volts AC	Hertz	Wire	Phase	
13.5 HDKBP*	13,500	110/220	50	3, 4	1, 3	12V / 24V
13.5 HDKBP*	13,500	115/230	50	3, 4	1, 3	12V / 24V
13.5 HDKBP*	13,500	120/240	50	3, 4	1, 3	12V / 24V
13.5 HDKBP*	13,500	120 & 230	50	2	1	12V / 24V
13.5 HDKBP*	13,500	120/380	50	4	3	12V / 24V
13.5 HDKBP*	13,500	230/400	50	4	3	12V / 24V
13.5 HDKBP*	13,500	240/416	50	4	3	12V / 24V
17.5 HDKBR*	17,500	110/220	50	3, 4	1, 3	12V / 24V
17.5 HDKBR*	17,500	115/230	50	3, 4	1, 3	12V / 24V
17.5 HDKBR*	17,500	120/240	50	3, 4	1, 3	12V / 24V
17.5 HDKBR*	17,500	120 & 230	50	2	1	12V / 24V
17.5 HDKBR*	17,500	220/380	50	4	3	12V / 24V
17.5 HDKBR*	17,500	230/400	50	4	3	12V / 24V
17.5 HDKBR*	17,500	240/416	50	4	3	12V / 24V
19 HDKBV*	19,000	110/220	50	3, 4	1, 3	12V / 24V
19 HDKBV*	19,000	115/230	50	3, 4	1, 3	12V / 24V
19 HDKBV*	19,000	220 & 230	50	2	1	12V / 24V
19 HDKBV*	19,000	220/380	50	4	3	12V / 24V
19 HDKBV*	19,000	230/400	50	4	3	12V / 24V
19 HDKBV*	19,000	240/416	50	4	3	12V / 24V

* – The diagonal line (/) in the model and specification number separates generator set characteristics from the specification number and letter. The specification number denotes customer requested options or deviations from the standard model. The specification letter advances (A to B, B to C, etc.) with major manufacturing changes.

– 380–13,800V (Refer to Genset Data Sheet).

Quick Serve Online (QSOL)

Documentation and operator manuals pertaining to the generator set are available on QuickServe Online.

QuickServe Online: <https://quickserve.cummins.com/info/index.html>

The information contained within this manual is based on information available at the time of going to print. In line with Cummins Power Generation policy of continuous development and improvement, information may change at any time without notice. Obtain the most up to date version available on QuickServe Online or contact your authorized distributor for assistance.

Related Literature

The related literature that is appropriate to your generator set includes:

- Operator Manual for Generator Set (A041K811)
- Installation Manual (A041K812)
- Service Manual for Generator Set (A041K813)
- Service Manual for Engine (981–0551 Series 03) Kubota 03-M-E3B and 03-M-DI-E3B

If further information is required, contact your authorized distributor.

Model Identification

This manual covers generator set models produced under the Cummins Power Generation and Cummins Onan brand names.

To avoid errors or delay in filling your parts order, always state the MODEL and SERIAL NUMBER from the Cummins Power Generation nameplate.

Model No.			
Serial No.		Spec.	
FREQUENCY: 60 HZ			
SERVICE RATING:			
PHASE: 3PH 3PH			
RATED KW:			
POWER FACTOR: 0.8 0.8			
RATED KVA:			
12 CAPABILITY:			
CONNECTIONS:			
BATTERY: VOLTS AMPS AMPS			
VDC 2400			
2400/4160			
ROTATING SPEED: 1800RPM			
NOMINAL RATED			
FUEL:			
WIRING DIAGRAM:			

The engine serial number is located on a data tag on the engine or is stamped on the engine block.

The control software number is located on the electronic control module (ECM) or can be obtained via the digital interface if one is available.

For reference document your genset information in the spaces below.

Generator Model Number: _____

Generator Set Serial Number: _____

Generator Spec Letter: _____

Engine Serial Number: _____

Digital Control Software: _____

Abbreviations

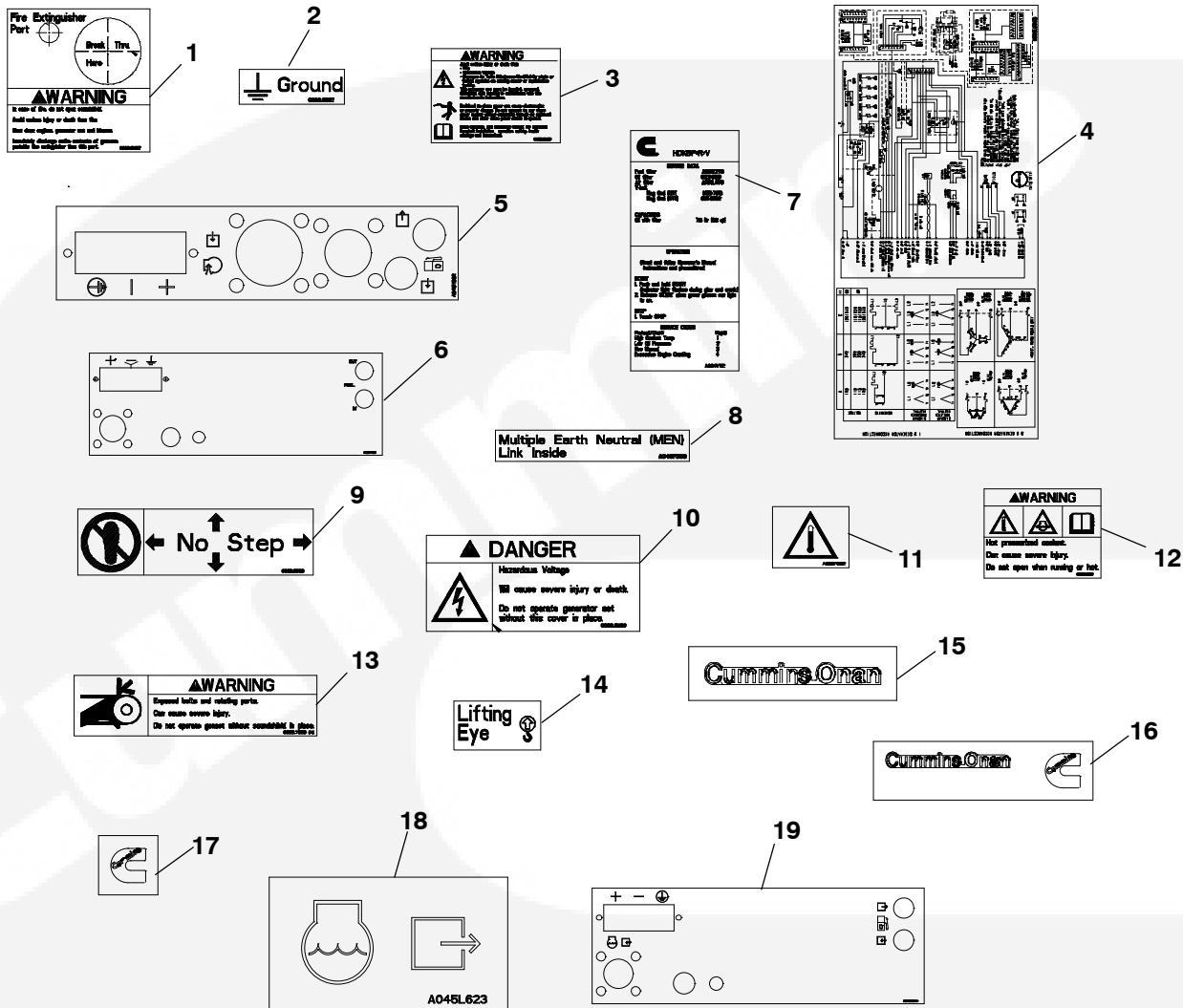
Some of the following abbreviations may be used throughout this Parts Manual:

AC	Alternating Current	LED	Light-Emitting Diode
ACB	Air Circuit Breaker	LTP	Limited Time Power Rating
ACH	Anti-Condensations Heaters	LTA	Low Temperature Aftercooling
ATS	Automatic Transfer Switch	LV	Low Voltage
Amp	Ampere	M	Meter
A/R	As Required	MCB	Miniature Circuit Breaker
AVR	Automatic Voltage Regulator	MCCB	Moulded Case Circuit Breaker
AWG	American Wire Gauge	MF	Mains Failed
BHP	Brake Horsepower	MFSS	Master First Start Sensor
BMS	Building Measurement System	mm	Millimeter
BST	Busbar Sensing Transformer	MOH	Mobile Off Highway
CAN	Controlled Area Network	MR	Mains Returned
CB	Circuit Breaker	MST	Mains Sensing Transformer
CCA	Cold Cranking Amps	MSU	Mains Sensing Unit
CHP	Combined Heat and Power	MV	Medium Voltage
COP	Continuous Power Rating	NEC	Neutral Earthing Contact
CT	Current Transformer	NFS	Not For Sale
		NPT	National Pipe Thread
dB(A)	Unit of noise level	OD	Outside Diameter
DC	Direct Current	oz.	Ounce
Deg	Degree	PC	PowerCommand 3.3
DIP	Dual In-line Package	PC	Printed Circuit
DMC	Digital Master Control	PF	Power Factor
DMSU	Demand Load Standby Unit	Ph	Phase
ECM	Engine Control Module	PFC	Power Factor Controller
EFC	Electronic Fuel Control	PLC	Programmable Logic Controller
EIT	External/Internal Tooth	PMG	Permanent Magnet Generator
EMCU	Engine Monitoring and Control Unit	PRP	Prime Power Rating
EMF	Electromotive Force	PSU	Power Supply Unit
EPROM	Erasable Programmable Read Only Memory	PT/CT	Potential Transformer/Current Transformer
EPU	Engine Protection Unit	PTC	Power Transfer Control
ET	External Tooth	QCC	Quadrature Current Control
FAE	Full Authority Engine	RFI	Radio Frequency Interference
FSS	First Start Sensor	RMS	Root Mean Square
GCP	Generator Control Panel	RPM	Revolutions Per Minute
Genset	Generator set	RT	Right
GFI	Ground Fault Interrupter	RTD	Resistance Temperature Detector
GKWT	Global Kilowatt Transducer	Spec	Specification
HMI	Human/Machine Interface	Thk	Thick
HV	High Voltage	UL	Underwriters Laboratories Inc.
IC	Integrated Circuit	UNC	Union National Coarse
ID	Inside Diameter	UNF	Union National Fine
IEC	International Electrotechnical Commission	V	Volts
I/O	Input / Output	VAC	Volts, Alternating Current
IT	Internal Tooth	VCB	Vacuum Circuit Breaker
kVA	Apparent Power	VDC	Volts, Direct Current
kVAR	Reactive Power	VF	Volt-free
kW	Active / Real Power (Kilowatt)	VT	Voltage Transformer
kWh	Unit of electrical energy or work	W/(ET, IT, EIT)	With
LPG	Liquid Petroleum Gas		
LT	Left		

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Labels



Label

Item	Part No.	Description	Qty
	098-8601	Label, Package – (Includes Labels marked #)	1
	A045H638	Label, Package – (Includes Labels marked +)	1
1	098-8592	+Label, Warning – Generator Operation	1
2	098-8597	+Label, Information – Ground	1
3	098-8599	+Label, Warning – Hazardous Voltage	1
4	098-8603	+Label, Warning – Wiring Diagram	1
5	A045H662	Label, Information – Rear Bulkhead	1
6	A034V091	Label, Information – Bulkhead (Spec A Only)	1
7	A034V112	+Label, Information – Model	1
8	A040F386	+Label, Information – Neutral	1
9	098-8593	#+Label, Information – No Step	1
10	098-8590	+Label, Danger – Hazardous Voltage	1
11	A030F092	+Label, Information – Temperature	1
12	098-8591	#+Label, Warning – Hot Pressure	1
13	098-7869	#Label, Warning – Rotating Parts	1
14	098-8596	#Label, Information – Lifting	1
15	098-8714	Label, Installation – Cummins Onan Logo	1
16	098-8717	Label, Information – Cummins Onan	1
17	098-8715	Label, Information – Cummins	1
18	A045L623	+Label, Information – Bulkhead (Spec B Only)	1
19	A045H644	Label, Information – Bulkhead (Spec B Only)	1

Consumables

The following is a list of consumables associated with the generator models covered in this manual:

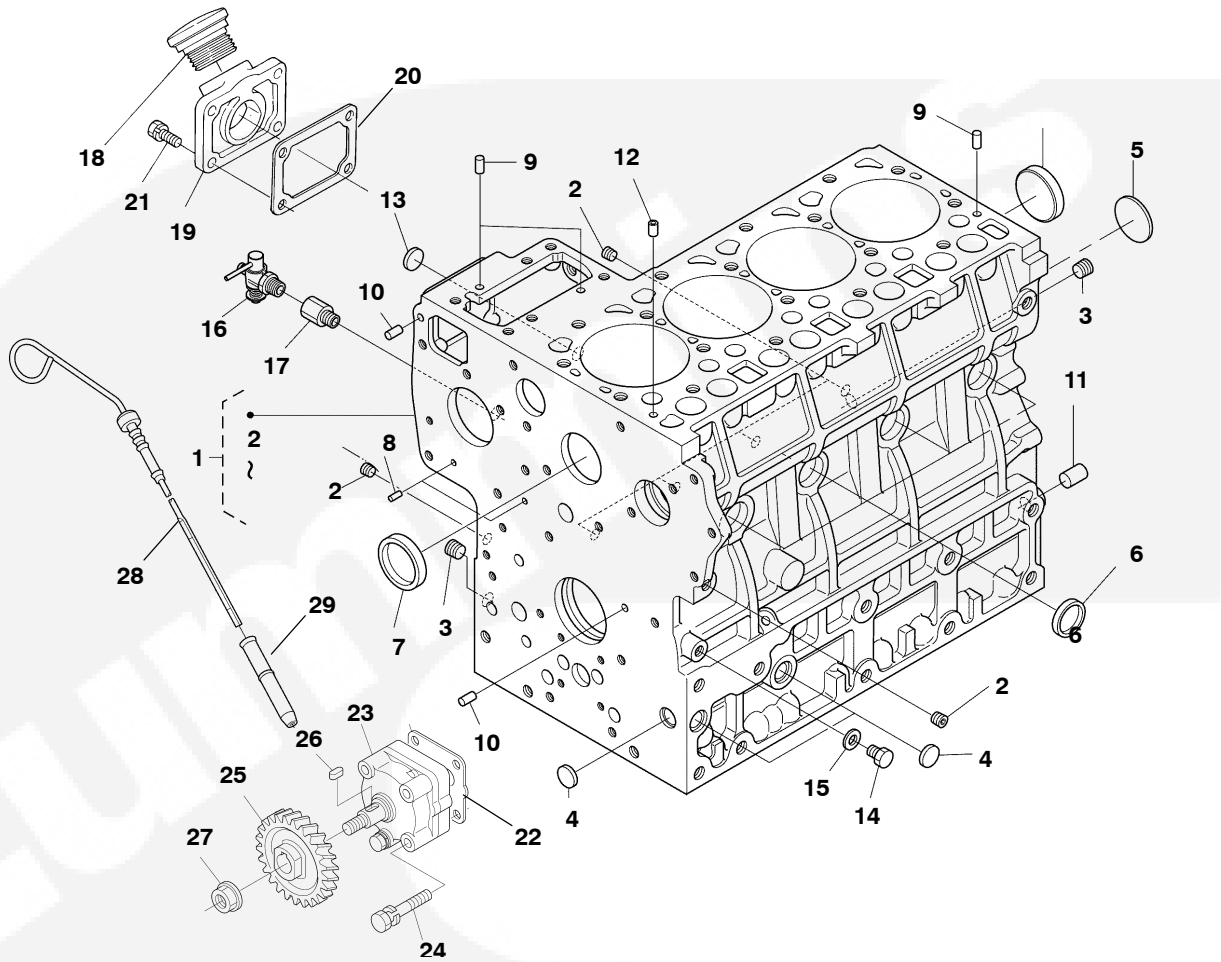
Service Consumables

Ref. Page No.	Part No.	Description	Qty
53	122-0810	Filter, Oil	1
58		Belt, Fan (37.5")	
	185-7016	12V	1
	511-0252	24V	1
61	A026K278	Filter, Fuel	1
51	130-6329	Thermostat	1
51	185-6004	Gasket, Thermostat	1
70	A026L076	Filter, Air	1

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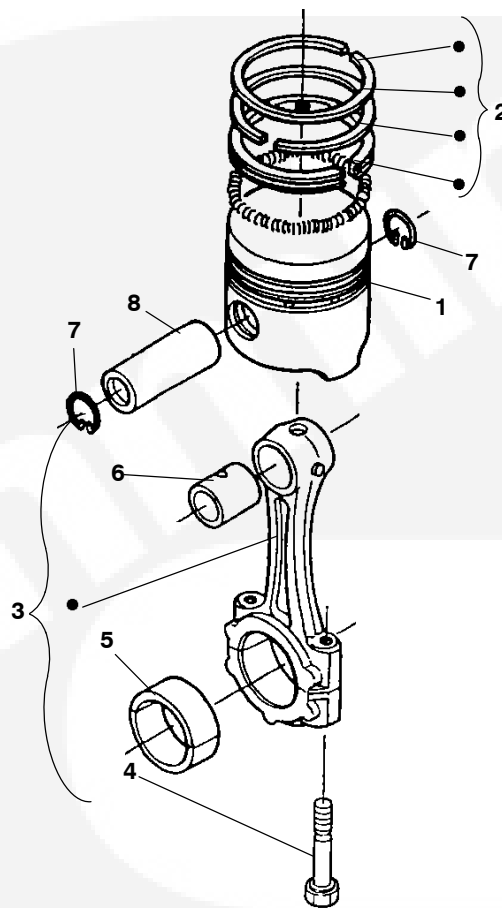
Engine HDKBP



Engine HDKBP

Item	Part No.	Description	Qty
		Assy, Engine Replacement	
	A045Y108	12V	1
	A045Y110	24V	1
1		Block, Cylinder (Includes Parts Marked*)	1
2	185-2233	*Plug	6
3	185-2234	*Plug	2
4	185-6121	*Plug, Expansion	3
5	185-6040	*Plug, Expansion	1
6	185-5840	*Cap, Sealing	6
7	185-5841	*Cap, Sealing	2
8	185-5842	*Pin, Straight	2
9	185-2350	*Pin, Straight	3
10	185-5853	*Pin, Straight	2
11	185-5844	*Pin, Straight	1
12	185-2094	*Pin, Pipe	1
13	185-5483	*Cap, Sealing	1
14	517-0373	Plug	1
15	185-2338	Gasket	1
16	185-5846	Drain, Valve	1
17	185-5847	Joint, Drain	1
18	517-0452	Plug, Oil Filter	1
19	123-2429	Flange, Oil Filter	1
20	101-0837	Gasket, Pump Cover	1
21	185-2386	Bolt	4
22	185-5849	Gasket, Oil Pump	1
23	185-5848	Assy Pump, Oil	1
24	185-7069	Bolt	4
25	185-5851	Gear, Oil Pump Drive	1
26	185-2352	Key	1
27	185-7031	Nut, Flange	1
28	123-2424	Gauge, Oil	1
29	123-2262	Guide, Oil Gauge	1

Piston HDKBP

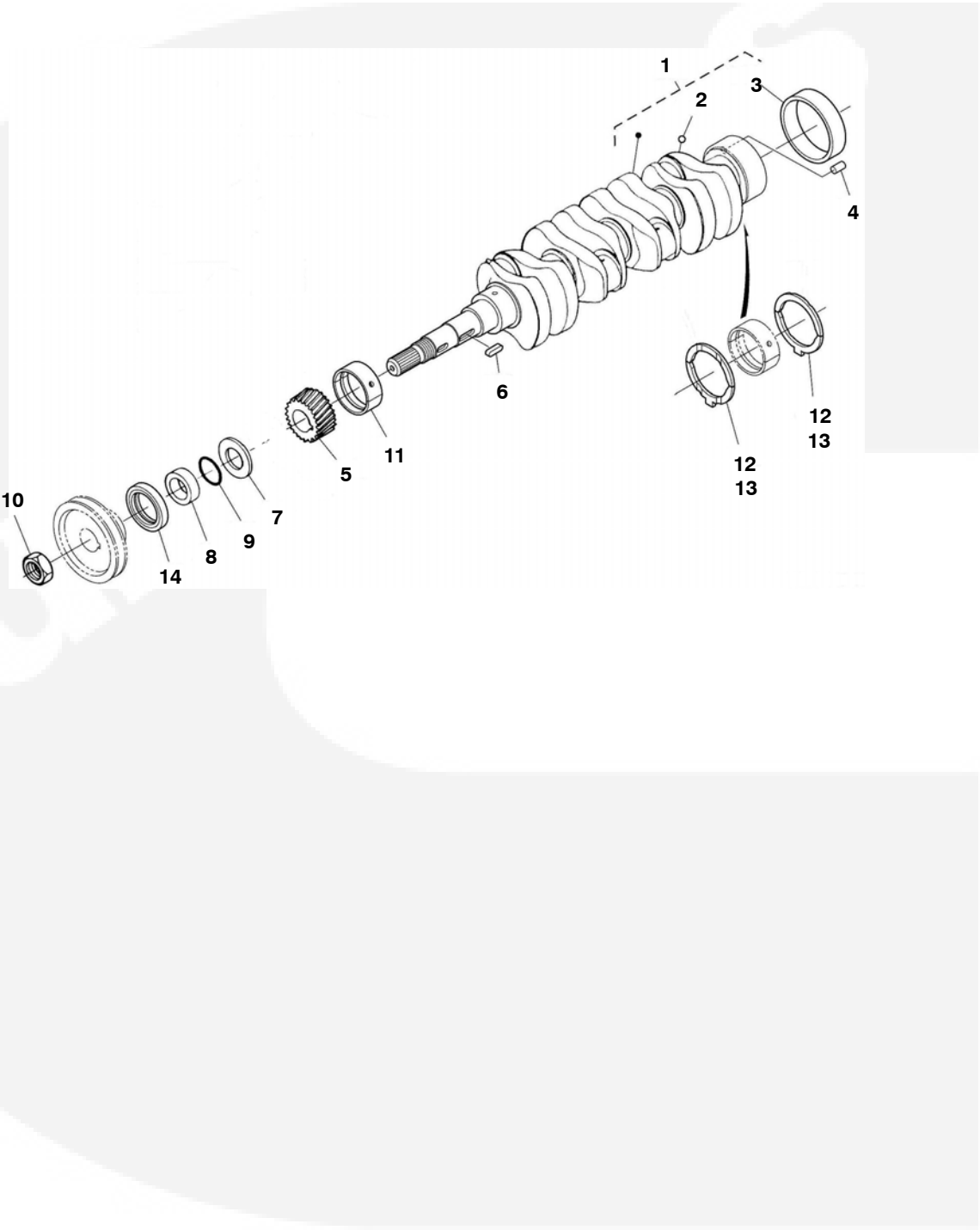


Item	Part No.	Description	Qty
1		Piston	
	112-0333	Standard	4
	112-0334	5mm Oversize	4
2		Ring Set, Piston	
	113-0357	Standard	4
	113-0358	5mm Oversize	4
3	185-5917	Rod Assy, Connecting (Includes Bolt, Bearing and Bushing)	4
4	185-6771	Bolt, Connecting Rod	8
5		Bearing, Connecting Rod	
	185-6076	Standard	4
	185-5921	2mm Undersiz	4
	185-5922	4mm Undersize	4
6	185-5918	Bushing, Connecting Rod	4
7	518-0732	Circlip, Piston Pin	8
8	112-0348	Pin, Piston	4

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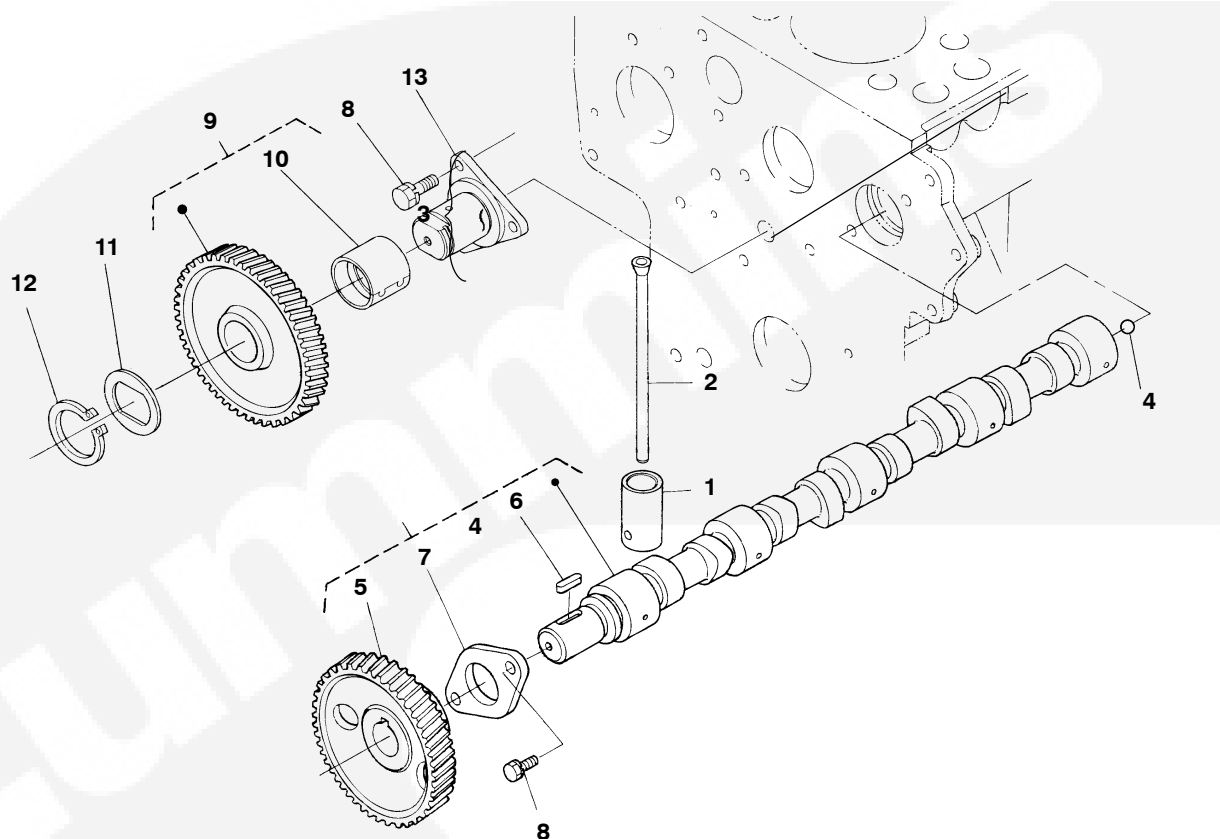
Crankshaft HDKBP



Crankshaft HDKBP

Item	Part No.	Description	Qty
1	104-2165	Crankshaft (Includes Parts Marked *)	1
2	185-5924	*Ball	4
3	185-5925	Bush, Crankshaft	1
4	516-2147	Pin, Straight	1
5	507-0006	*Gear, Oil Pump Drive	1
6	185-5905	Key	1
7	185-6973	Slinger, Oil	1
8	185-5928	Collar	1
9	185-5929	O'Ring	1
10	185-5930	Nut, Camshaft	1
11		Bearing, Crankshaft	
	104-2033	Standard	1
	104-2037	2mm, Undersize	1
	104-2038	4mm, Undersize	1
12		Bearing, Upper Thrust	
	104-2034	Standard	4
	104-2041	2mm, Oversize	4
	104-2042	4mm, Oversize	4
13		Bearing, Lower Thrust	
	104-2036	Standard	2
	104-2043	0.2 mm Oversize	2
	104-2044	0.4 mm Oversize	2
14	185-5931	Seal, Oil	1

Camshaft HDKBP

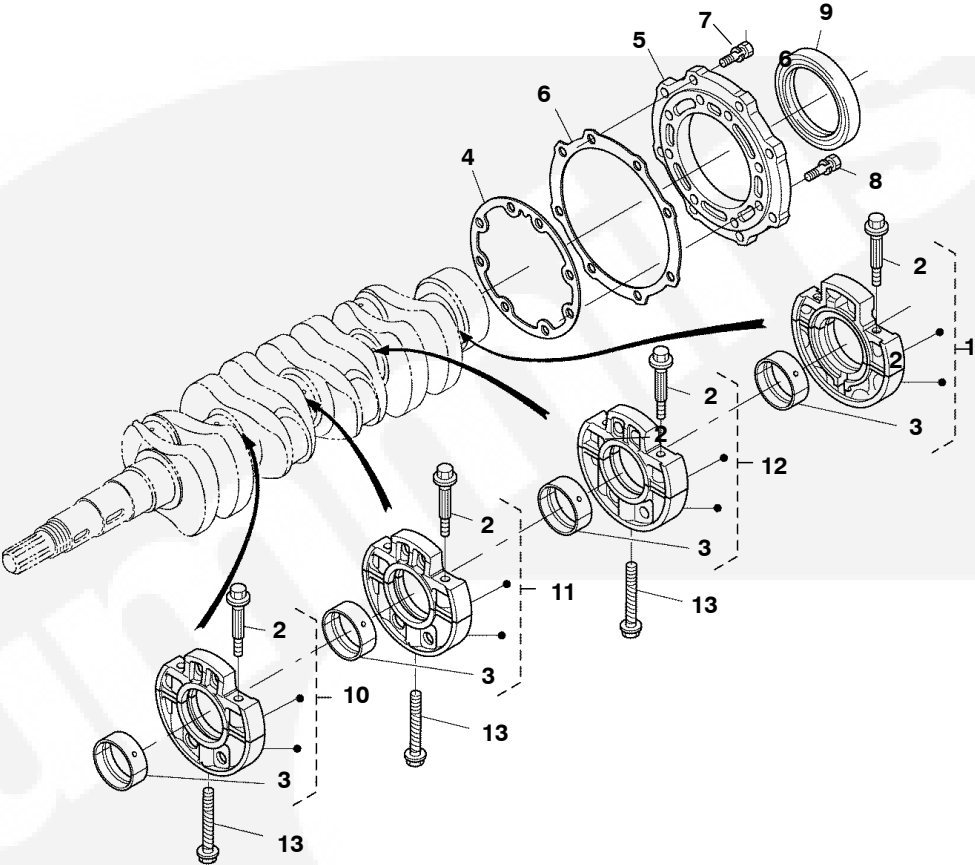


Item	Part No.	Description	Qty
1	185-5900	Tappet	8
2	185-5901	Rod, Push	8
3	105-0771	Camshaft Assy (Includes Parts Marked *)	1
4	185-5924	Ball	1
5	507-0007	Gear, Camshaft	1
6	185-5905	*Key	1
7	185-5906	*Stopper, Camshaft	1
8	185-2400	*Bolt	5
9	507-0008	Gear Assy, Idle (Includes Bushing)	1
10	508-1216	Bushing, Idle Gear	1
11	406-1071	Collar, Idle Gear	1
12	185-6072	Circlip, Idle Gear	1
13	306-5438	Shaft, Idle Gear	1

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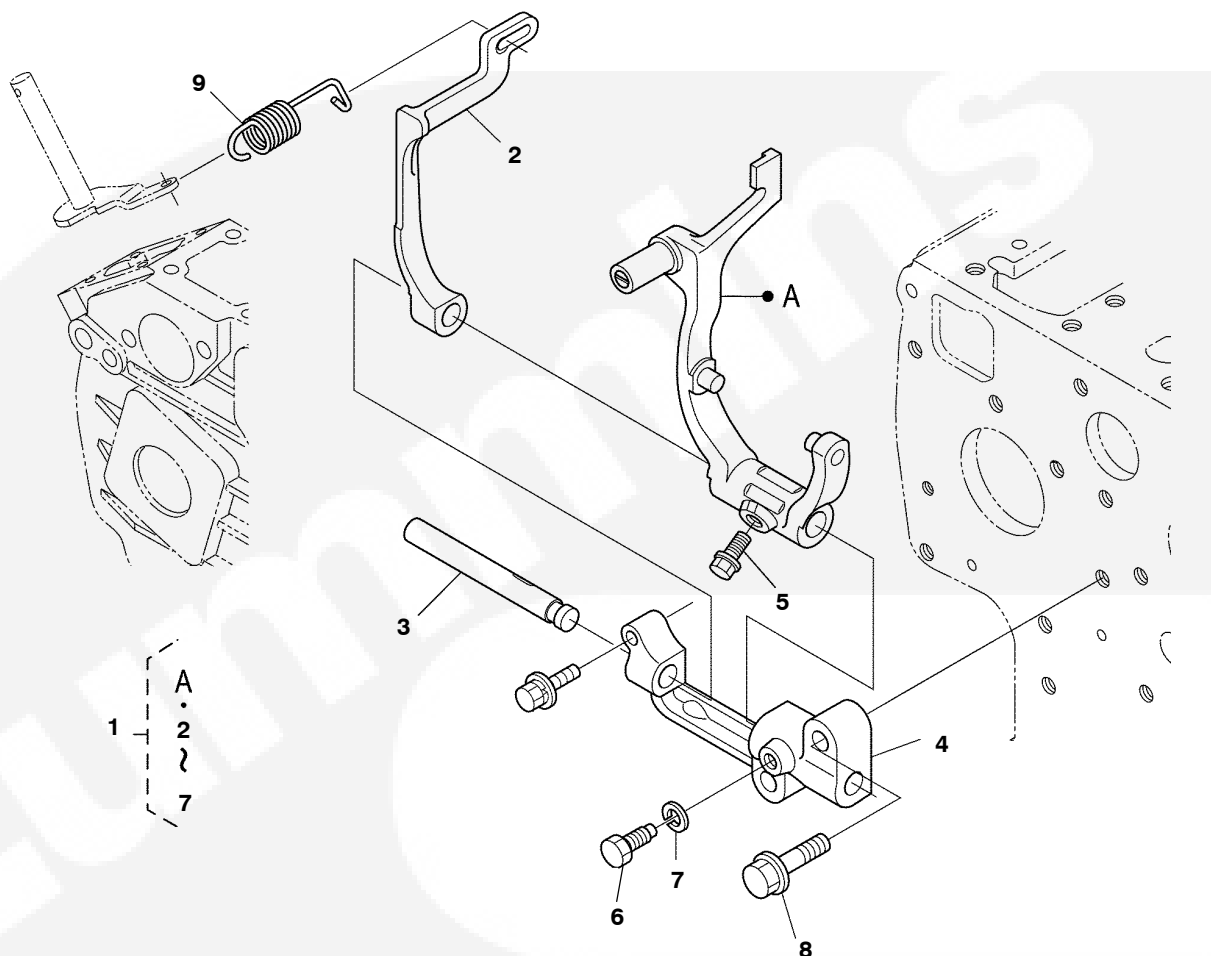
Main Bearing Case HDKBP



Main Bearing Case HDKBP

Item	Part No.	Description	Qty
1	104-2029	Housing, Main Bearing	1
2	800-6329	Bolt, Bearing Case	8
3		Bearing	
	104-2035	Standard Set	1
	104-2039	0.20mm Set	1
	104-2040	0.40mm Set	1
4	185-6766	Gasket, Bearing Case	1
5	101-0836	Cover, Bearing Case	1
6	185-5893	Gasket, Bearing Case Cover	1
7	185-2403	Bolt	8
8	185-2404	Bolt	8
9	509-0416	Seal, Oil	1
10	104-2031	Housing, Main Bearing	1
11	104-2032	Housing, Main Bearing	1
12	104-2164	Housing, Main Bearing	1
13	185-5899	Bolt, Bearing Housing	3

Governor HDKBP

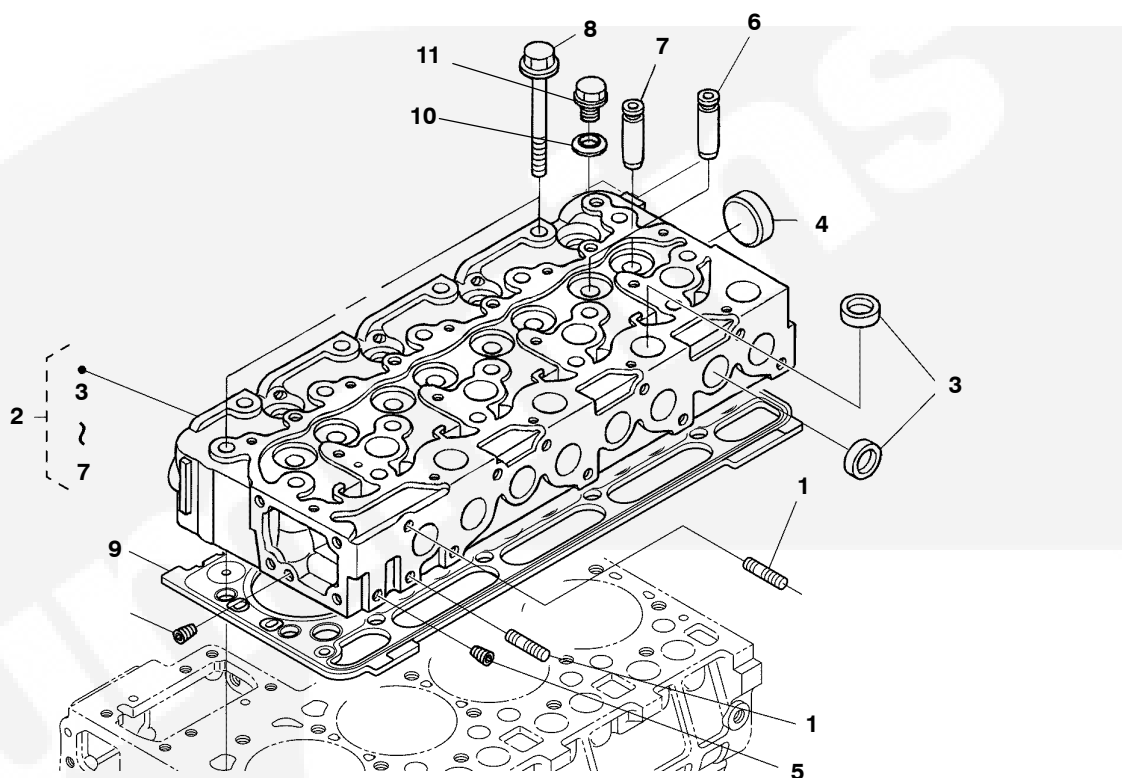


Item	Part No.	Description	Qty
1	306-5439	Lever, Governor	1
2	150-2842	Lever Assy, Fork (Includes Parts Marked *)	1
3	150-2805	*Shaft, Fork Level	1
4	150-2836	*Holder, Fork Lever	1
5	800-6305	*Bolt, Flange	1
6	800-6306	*Bolt	1
7	185-6759	*Washer, Spring	1
8	800-6334	*Bolt, Flange	1
9	506-0028	Spring, Governor	1

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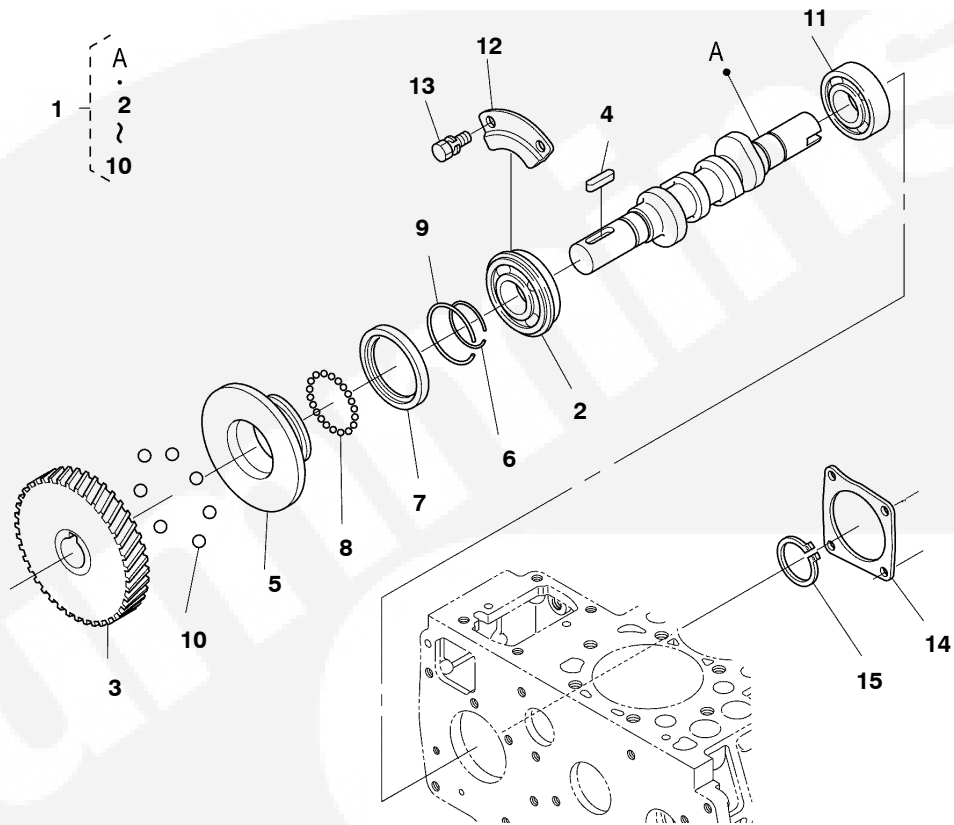


Cylinder Head HDKBP



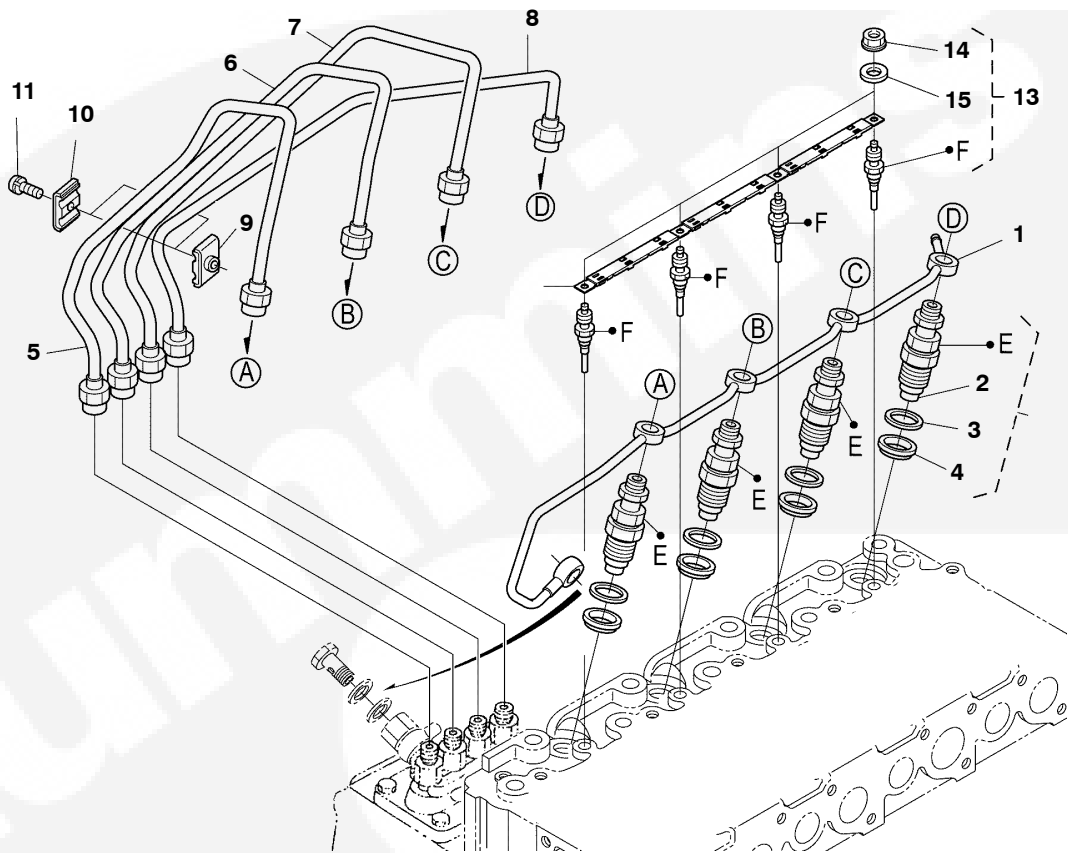
Item	Part No.	Description	Qty
1	185-6048	Stud	2
2	110-4097	Head Assy, Cylinder (Includes Parts Marked *)	1
3	185-5861	*Cap, Sealing	12
4	185-2412	*Cap, Sealing	1
5	185-2188	*Plug	2
6	185-5862	*Guide, Inlet Valve	4
7	110-3987	*Guide, Exhaust Valve	4
8	185-5865	Bolt, Cylinder Head	18
9		Gasket, Cylinder Head	
	110-4098	1.15mm	1
	110-4099	1.20mm	1
	110-4100	1.25mm	1
	110-4102	1.30mm	1
	110-4098	1.35mm	1
10	185-5867	Plug	1
11	185-5868	Washer, Rubber	1

Fuel Camshaft HDKBP



Item	Part No.	Description	Qty
1	150-2978	Camshaft, Fuel	1
2	185-5947	Bearing, Ball	1
3	507-0041	*Gear, Injection Pump	1
4	185-5949	*Key, Feather	1
5	150-2798	*Sleeve, Governor	1
6	518-0712	*Clip, External Circular	1
7	150-2800	*Case, Governor Ball	1
8	185-5575	*Ball	39
9	518-0713	*Clip, Circular	1
10	105-0741	*Ball	7
11	510-0265	Bearing, Ball	1
12	185-5962	Stopper, Fuel Camshaft	1
13	185-6956	Bolt	2
14	150-2993	Gasket	1
15	185-5963	Clip, External Circular	1

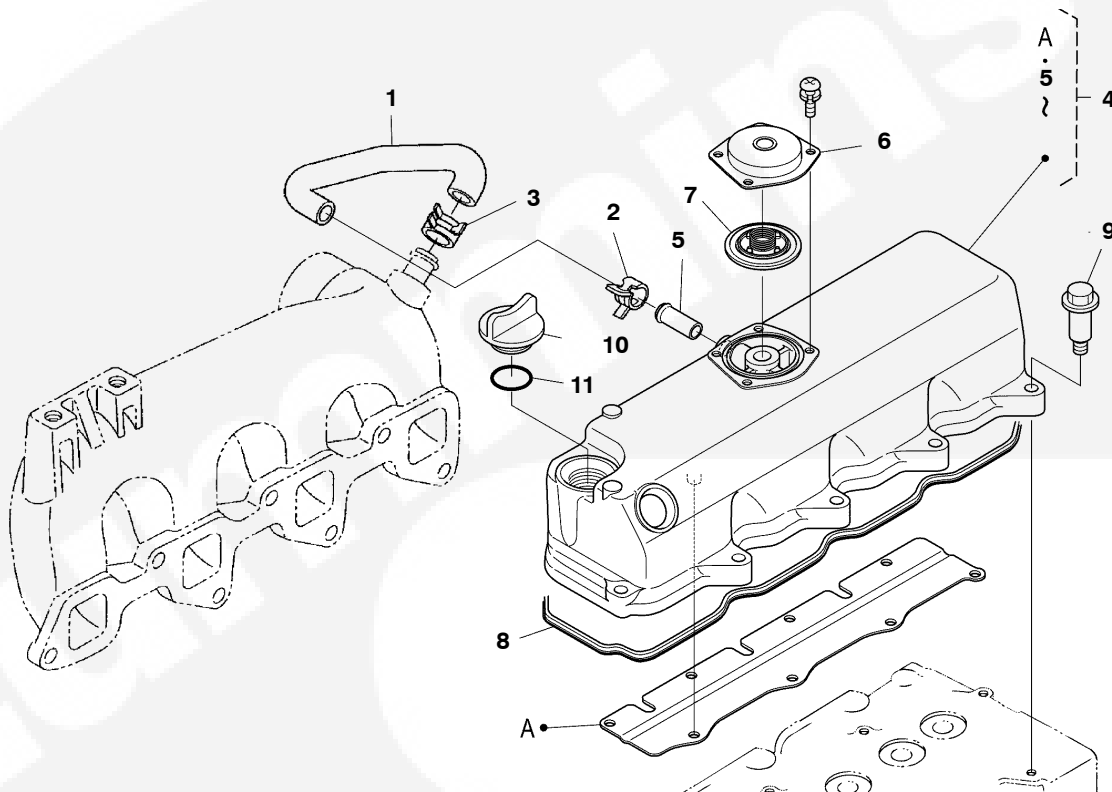
Nozzle Holder and Glow Plug



Nozzle Holder and Glow Plug

Item	Part No.	Description	Qty
1	185-6731	Assy. Pipe, Overflow	1
2	185-6095	Nozzle	4
3	185-5337	Gasket	4
4	185-5985	Seal, Heat	4
5	185-5986	Pipe, Injection	1
6	185-5987	Pipe, Injection	1
7	501-0886	Pipe, Injection	1
8	185-5989	Pipe, Injection	1
9	185-5612	Clamp, Pipe	3
10	185-2345	Clamp, Pipe	3
11	185-2385	Screw (With Washer)	3
12		Glow Plug	
	185-5990	12V	4
	185-6725	24V	4
13	337-4114	Cord, Glow Plug	4
14	185-5615	Nut, Flange	4
15	185-7004	Washer, Plain	4
16	185-6094	Kit, Holder, Nozzle (Includes Nozzle, Gasket and Heat Seal)	4

Cylinder Head Cover

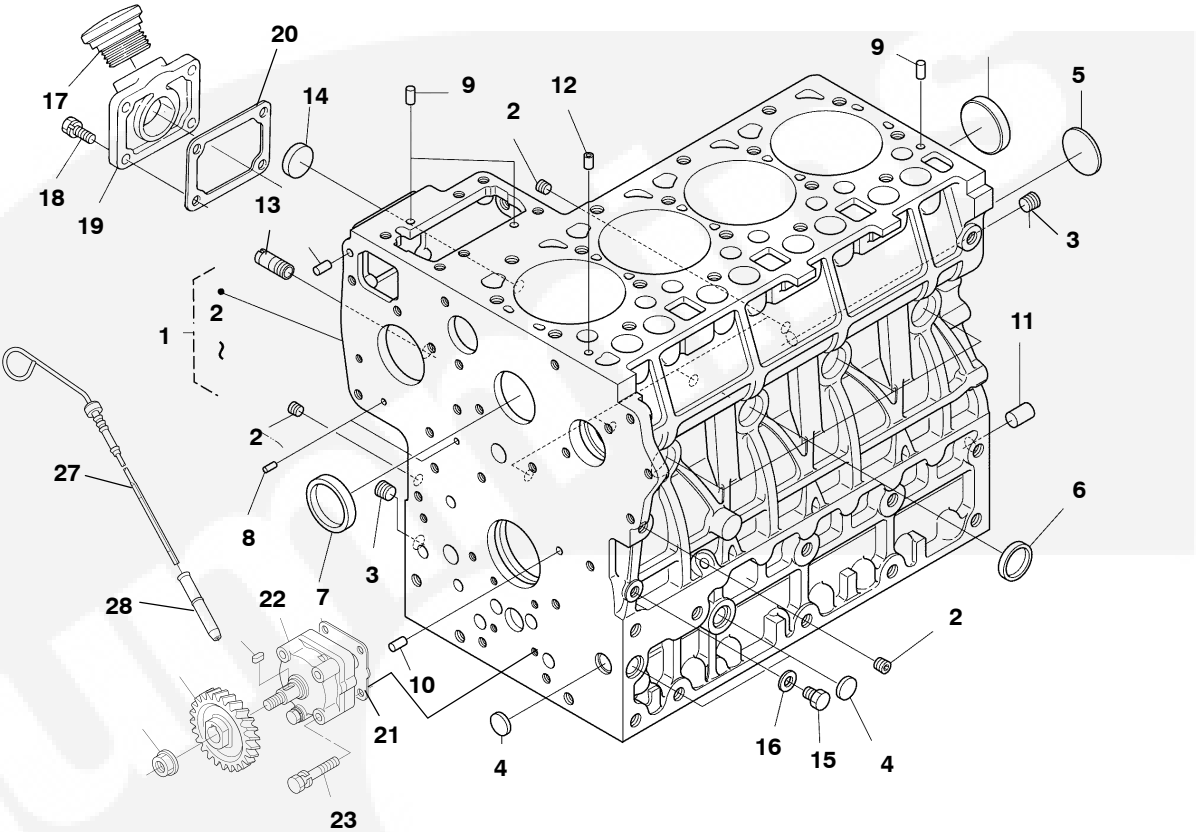


Item	Part No.	Description	Qty
1	123-2423	Tub, Breather	1
2	181-9025	Clamp, Hose	1
3	185-6722	Clamp, Hose	1
4	134-5391	Cover, Cylinder Head	1
5	185-6103	Pipe, Water Return	1
6	181-9238	Cover, Breather	1
7	123-2264	Breather	1
8	115-0567	Gasket, Head Cover	1
9	800-6330	Bolt	10
10	185-5407	Plug, Oil Filter	1
11	509-0414	O'Ring	1

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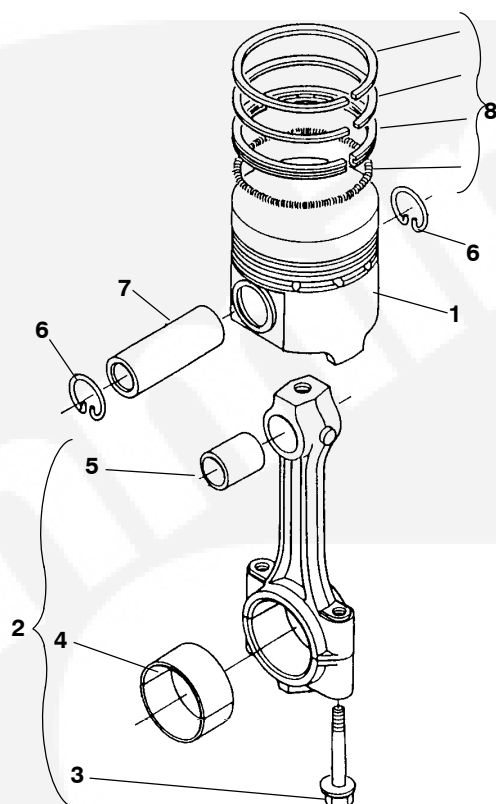
Engine HDKBR and HDKBV



Engine HDKBR and HDKBV

Item	Part No.	Description	Qty
		Assy, Engine Replacement	
	A045Y135	12V	1
	A045Y137	24V	1
1	110-4105	Block, Cylinder (Includes Parts Marked*)	1
2	185-2233	*Plug	6
3	185-2234	*Plug	2
4	185-6121	*Plug, Expansion	3
5	185-6040	*Plug, Expansion	1
6	185-5840	*Cap, Sealing	6
7	185-5841	*Cap, Sealing	2
8	185-5842	*Pin, Straight	2
9	185-2350	*Pin, Pipe	3
10	185-5843	*Pin, Straight	2
11	185-5844	*Pin, Straight	1
12	185-2094	*Pin, Pipe	1
13	505-2529	*Pipe, Water Return	1
14	185-5483	*Cap, Sealing	3
15	517-0373	Plug	1
16	185-2338	Gasket	1
17	517-0452	Plug, Oil Filter	1
18	185-2389	Bolt	4
19	123-2429	Flange, Oil Filter	1
20	101-0837	Gasket, Pump Cover	1
21	185-5849	Cock Assy., Drain	1
22	185-5848	Pump, Oil	1
23	185-7069	Bolt	4
24	185-2352	Key	1
25	185-5851	Gear, Oil Pump Drive	1
26	185-7031	Nut, Flange	1
27	123-2424	Gauge, Oil	1
28	123-2262	Guide, Oil Gauge	1

Piston HDKBR and HDKBV

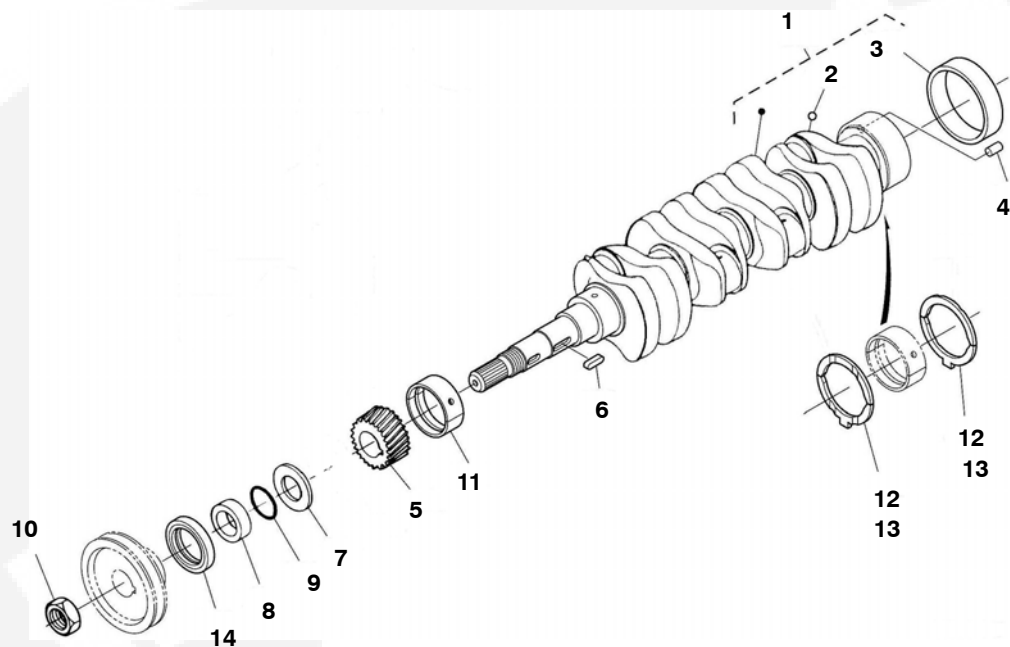


Item	Part No.	Description	Qty
1		Piston	
	112-0345	Standard	4
	112-0346	5mm Oversize	4
2	185-5917	Rod Assy, Connecting (Includes Bolt, Bearing and Bushing)	4
3	185-6771	Bolt, Connecting Rod	8
4		Bearing, Connecting Rod	
	185-6076	Standard	4
	185-5921	2mm Undersize	4
	185-5922	4mm Undersize	4
5	185-5918	Bushing, Connecting Rod	4
6	518-0732	Circlip, Piston Pin	8
7	112-0348	Pin, Piston	4
8		Ring Set, Piston	
	541-1168	Standard	4
	541-1169	5mm Oversize	4

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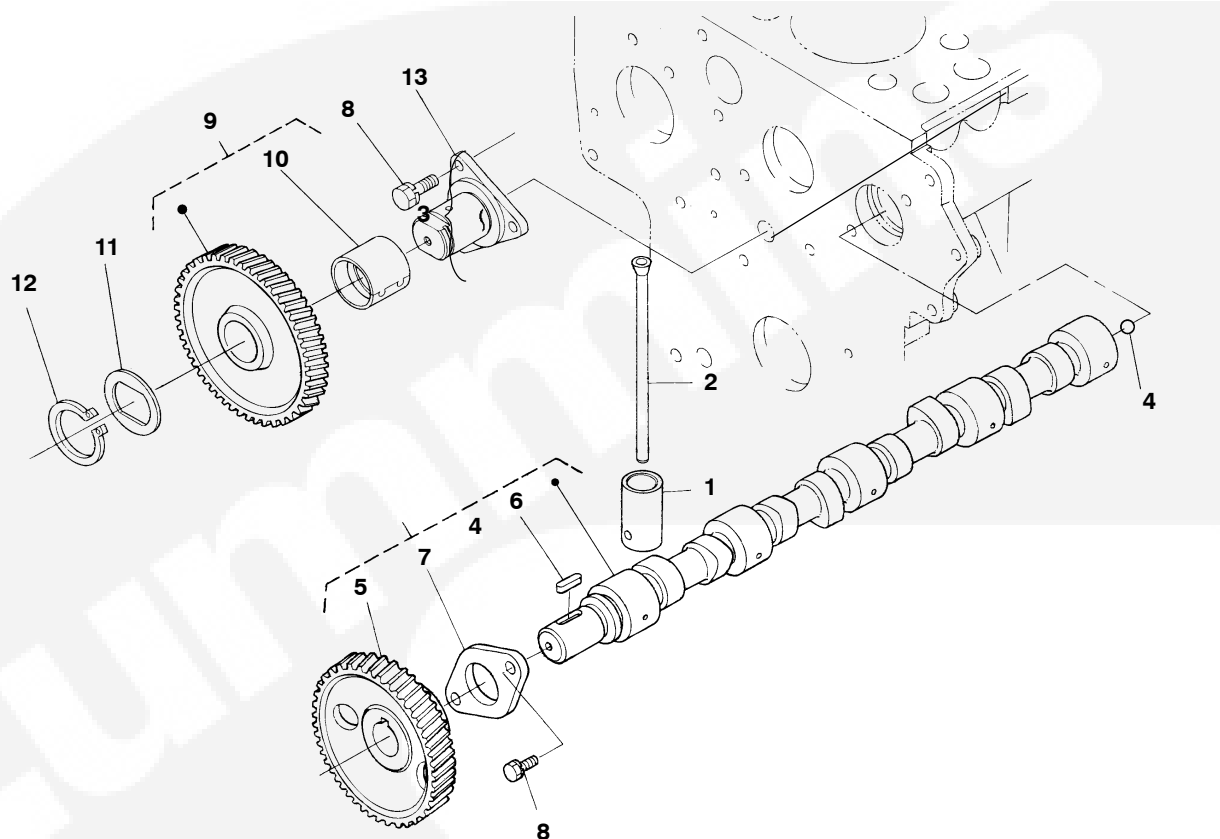
Crankshaft HDKBR and HDKBV



Crankshaft HDKBR and HDKBV

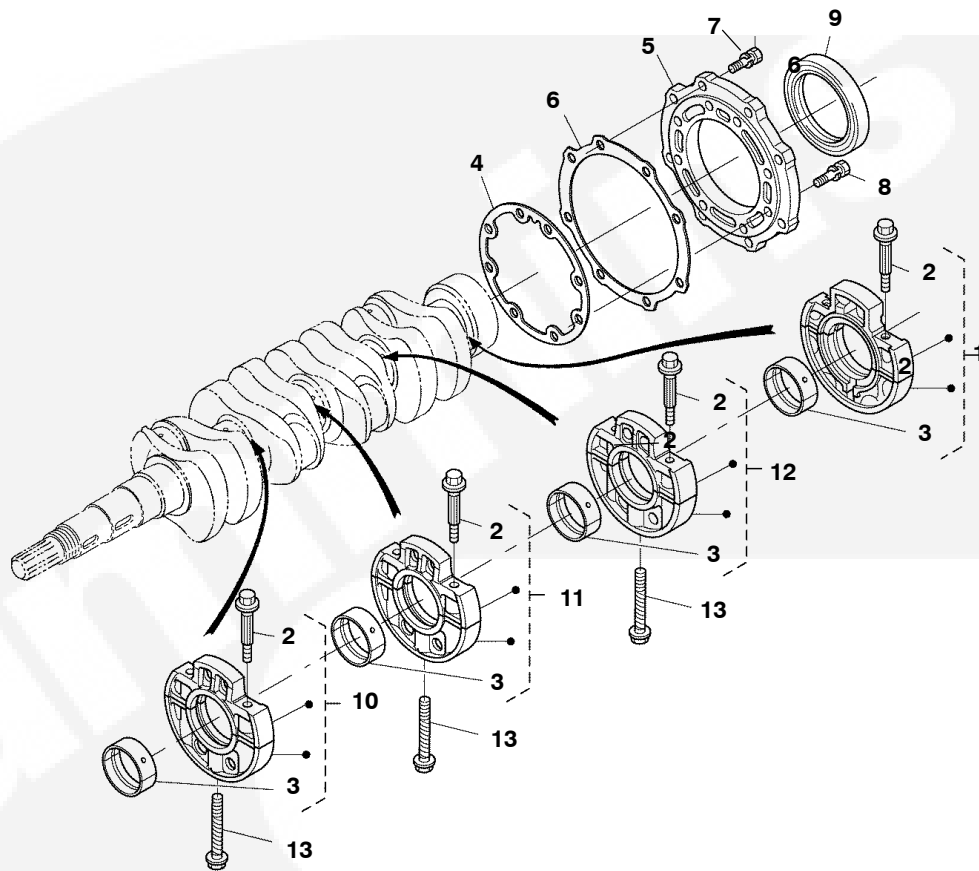
Item	Part No.	Description	Qty
1	104-2165	Crankshaft (Includes Parts Marked *)	1
2	185-5924	*Ball	4
3	185-5925	Bush, Crankshaft	1
4	516-2147	Pin, Straight	1
5	507-0042	*Gear, Oil Pump Drive	1
6	185-6081	Key	1
7	185-6973	Slinger, Oil	1
8	185-5928	Collar	1
9	185-5929	O'Ring	1
10	185-5930	Nut, Camshaft	1
11		Bearing, Crankshaft	
	104-2033	Standard	1
	104-2037	2mm, Undersize	1
	104-2038	4mm, Undersize	1
12		Bearing, Upper Thrust	
	104-2034	Standard	4
	104-2041	2mm, Oversize	4
	104-2042	4mm, Oversize	4
13		Bearing, Lower Thrust	
	104-2036	Standard	2
	104-2043	0.2 mm Oversize	2
	104-2044	0.4 mm Oversize	2
14	185-5931	Seal, Oil	1

Camshaft HDKBR and HDKBV



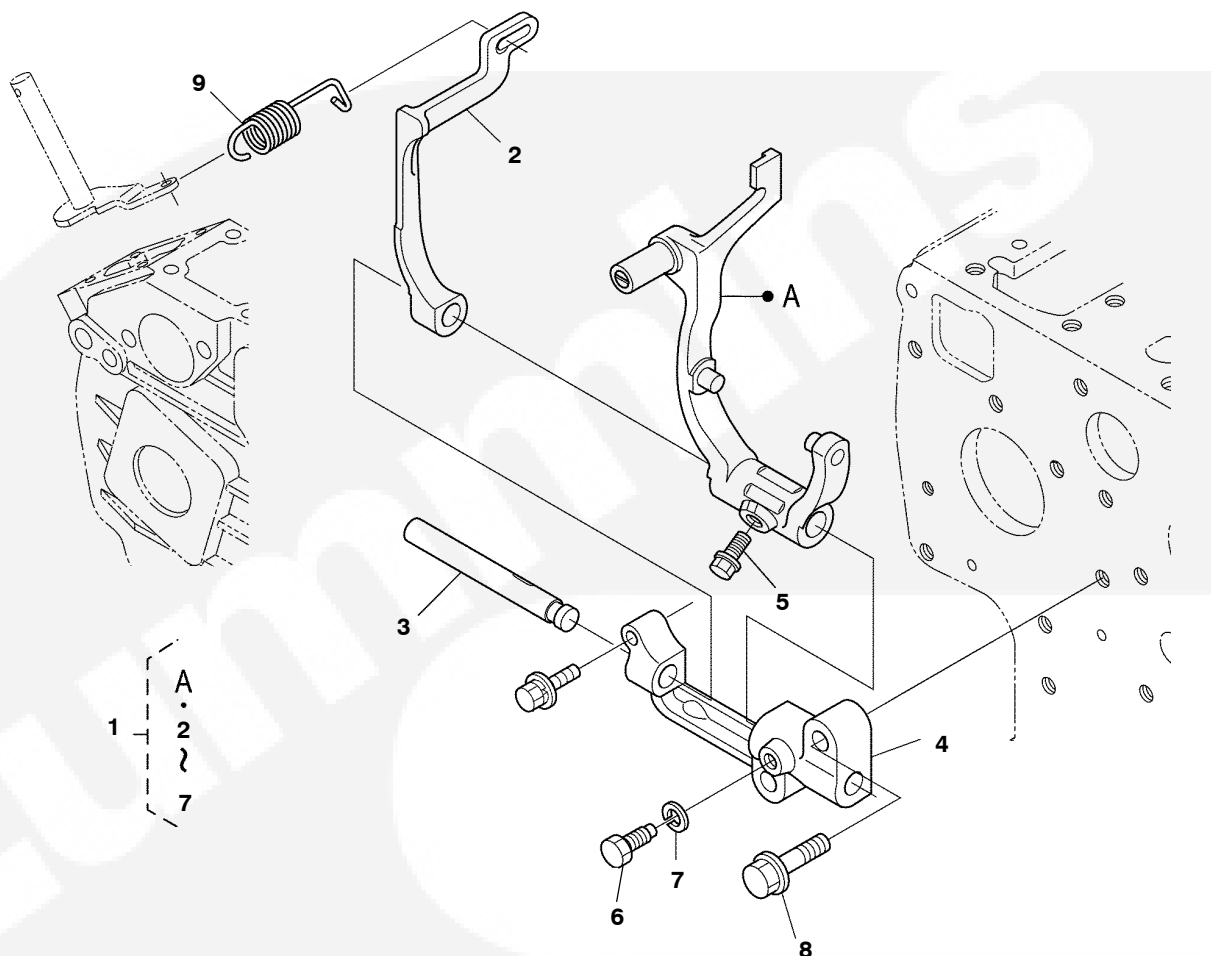
Item	Part No.	Description	Qty
1	185-5900	Tappet	8
2	115-0568	Rod, Push	8
3	105-0772	Camshaft Assy (Includes Parts Marked *)	1
4	185-5924	Ball	1
5	507-0007	Gear, Camshaft	1
6	185-5905	*Key	1
7	185-5906	*Stopper, Camshaft	1
8	185-2400	*Bolt	5
9	507-0008	Gear Assy, Idle (Includes Bushing)	1
10	508-1216	Bushing, Idle Gear	1
11	406-1071	Collar, Idle Gear	1
12	185-6072	Circlip, Idle Gear	1
13	306-5438	Shaft, Idle Gear	1

Main Bearing Case HDKBR and HDKBV



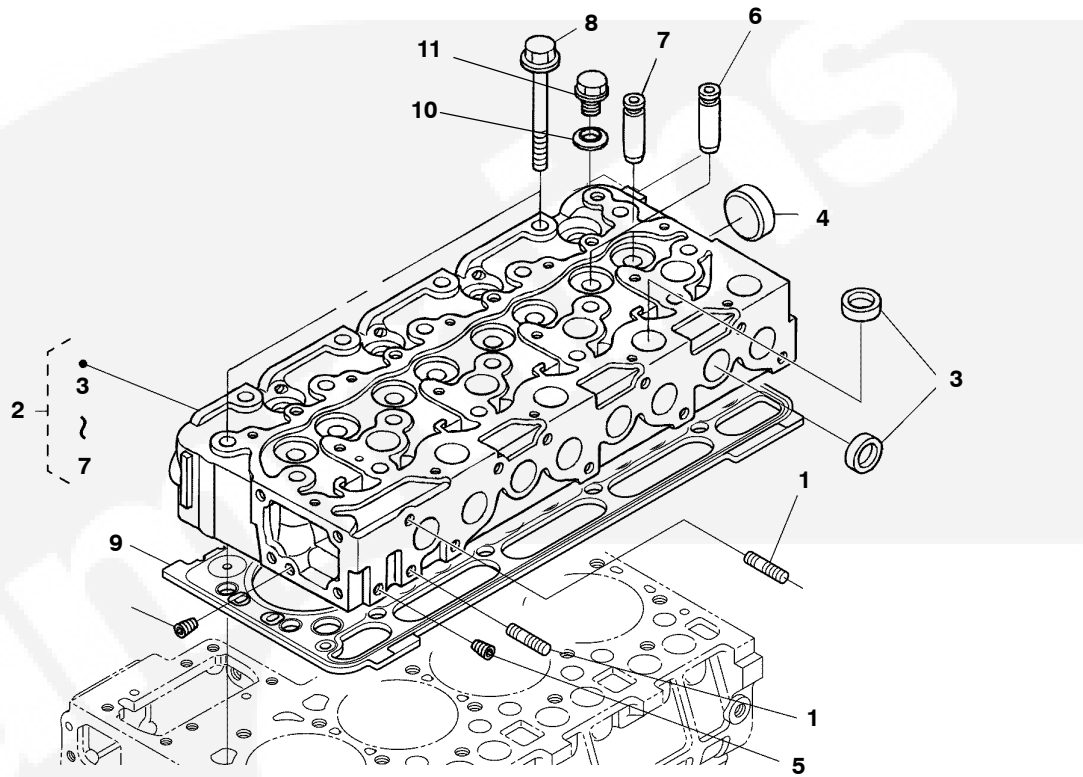
Item	Part No.	Description	Qty
1	104-2166	Housing, Main Bearing	1
2	800-6329	Bolt, Bearing Case	8
3		Bearing	
	104-2035	Standard Set	1
	104-2039	0.20mm Set	1
	104-2040	0.40mm Set	1
4	185-6766	Gasket, Bearing Case	1
5	101-0836	Cover, Bearing Case	1
6	185-5893	Gasket, Bearing Case Cover	1
7	185-2403	Bolt	8
8	185-2404	Bolt	8
9	509-0416	Seal, Oil	1
10	104-2031	Housing, Main Bearing	1
11	104-2032	Housing, Main Bearing	1
12	104-2164	Housing, Main Bearing	1
13	185-5899	Bolt, Bearing Housing	3

Governor HDKBR and HDKBV



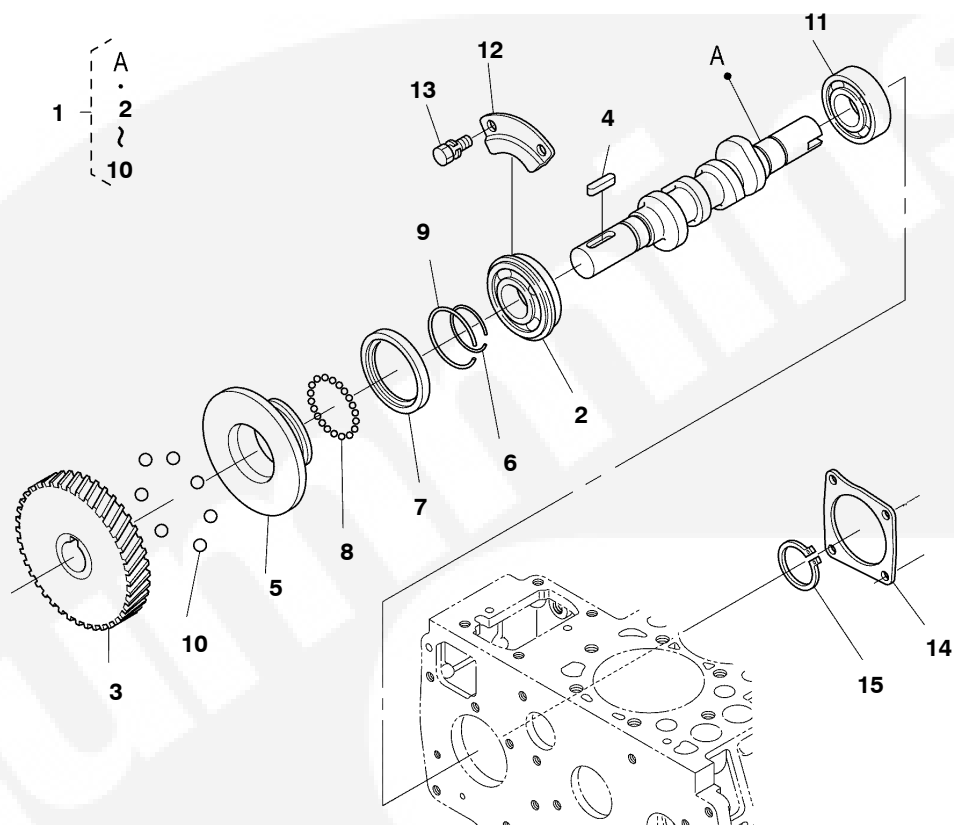
Item	Part No.	Description	Qty
1	150-2986	Lever, Governor	1
2	150-2842	Lever Assy, Fork (Includes Parts Marked *)	1
3	150-2805	*Shaft, Fork Level	1
4	150-2836	*Holder, Fork Lever	1
5	800-6305	*Bolt, Flange	1
6	800-6306	*Bolt	1
7	185-6759	*Washer, Spring	1
8	800-6334	*Bolt, Flange	1
9	506-0028	Spring, Governor	1

Cylinder Head HDKBR and HDKBV



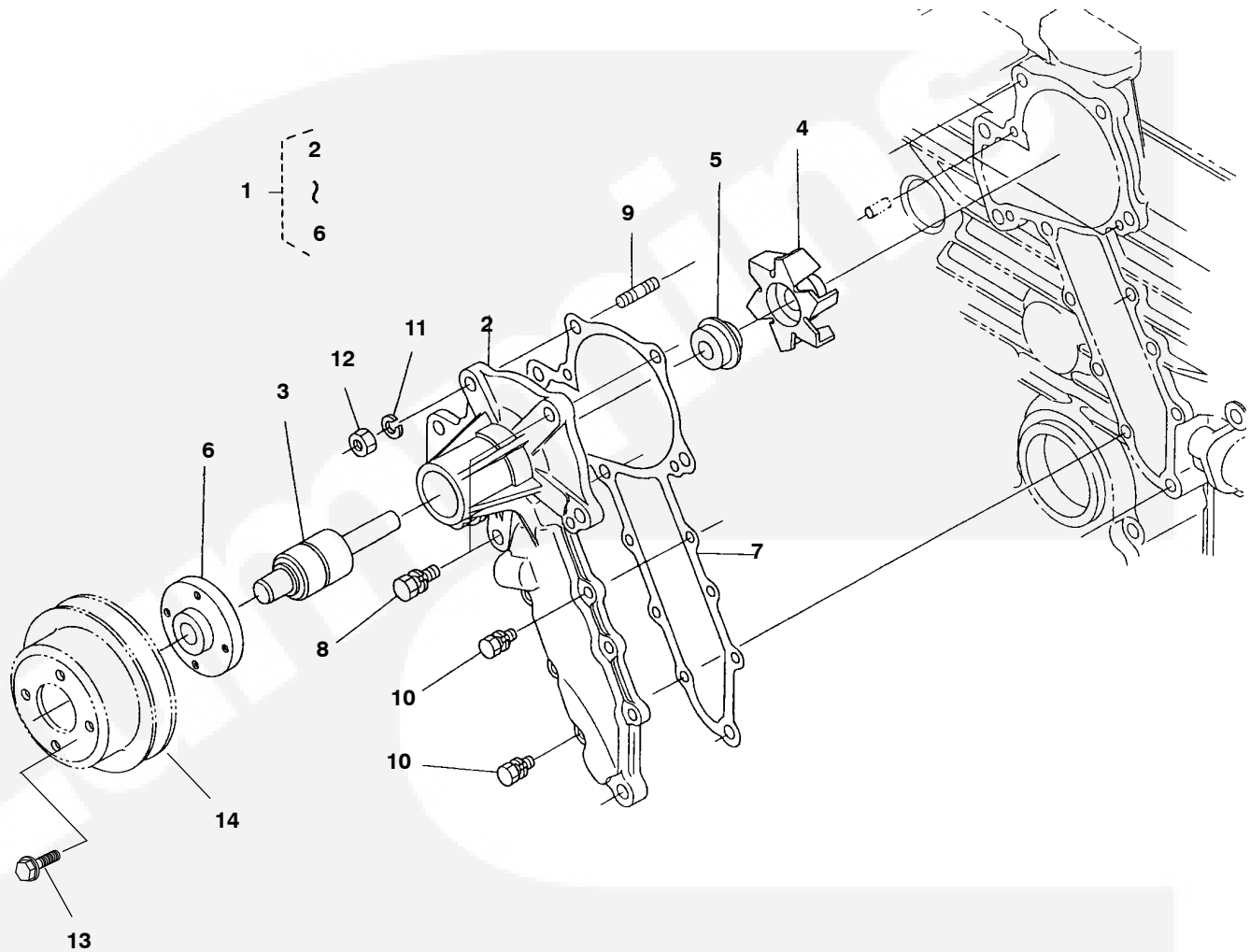
Item	Part No.	Description	Qty
1	185-6048	Stud	2
2	110-4106	Head Assy, Cylinder (Includes Parts Marked *)	1
3	185-5861	*Cap, Sealing	12
4	185-2421	*Cap, Sealing	1
5	185-2188	*Plug	2
6	185-5862	*Guide, Inlet Valve	4
7	110-3987	*Guide, Exhaust Valve	4
8	185-5865	Bolt, Cylinder Head	18
9		Gasket, Cylinder Head	
	110-4107	1.15mm	1
	110-4108	1.20mm	1
	110-4109	1.25mm	1
	110-4110	1.30mm	1
	110-4111	1.35mm	1
10	185-5867	Plug	1
11	185-5868	Washer, Rubber	1

Fuel Camshaft HDKBR and HDKBV



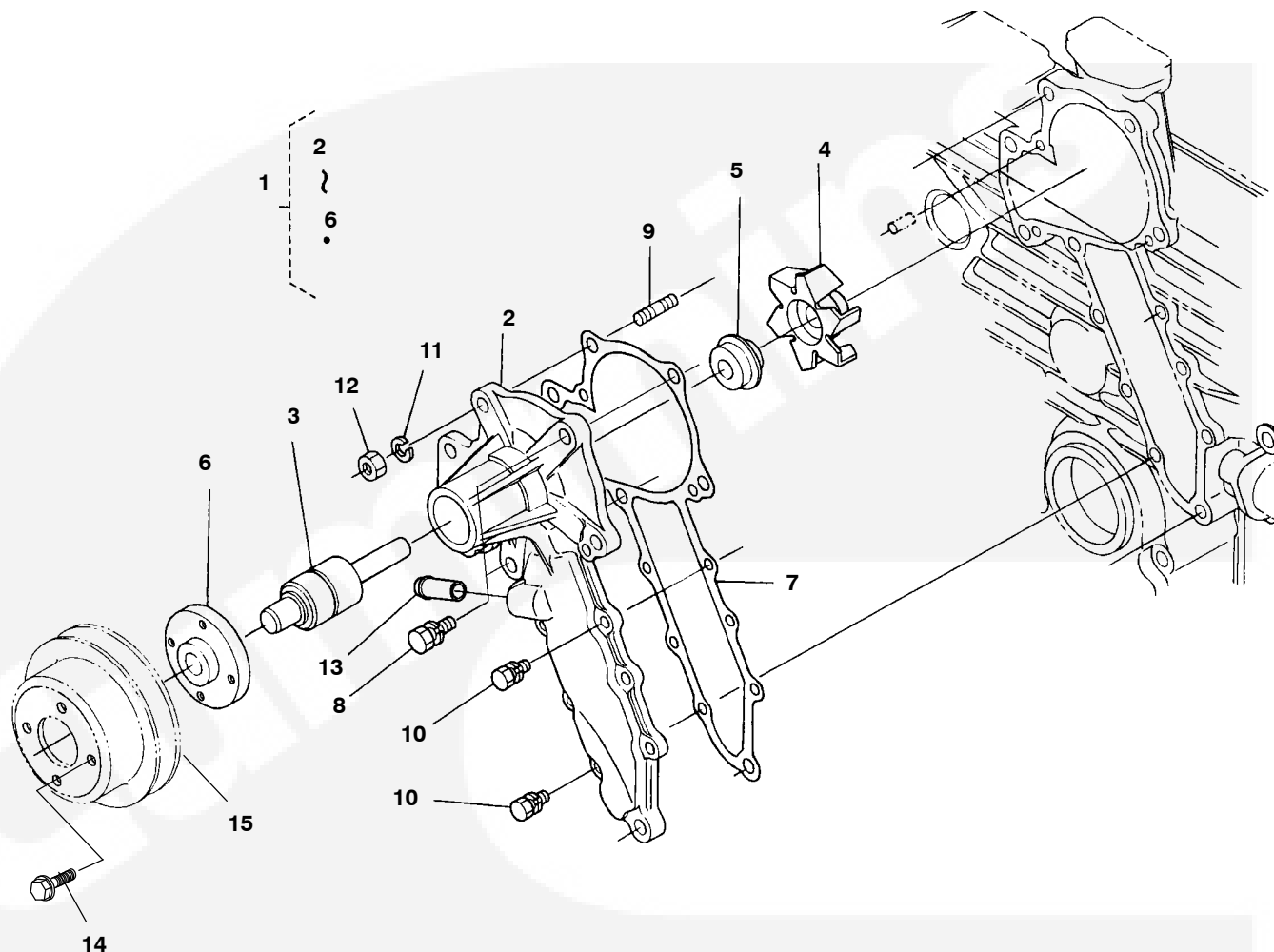
Item	Part No.	Description	Qty
1	150-2983	Camshaft, Fuel	1
2	510-0266	Bearing, Ball	1
3	507-0041	*Gear, Injection Pump	1
4	185-5949	*Key, Feather	1
5	150-2798	*Sleeve, Governor	1
6	518-0712	*Clip, External Circular	1
7	150-2800	*Case, Governor Ball	1
8	185-5575	*Ball	39
9	518-0713	*Clip, Circular	1
10	105-0741	*Ball	7
11	510-0267	Bearing, Ball	1
12	150-2984	Stopper, Fuel Camshaft	1
13	185-6956	Bolt	2
14	150-2993	Gasket	1
15	185-5963	Clip, External Circular	1

Water Pump HDKBP



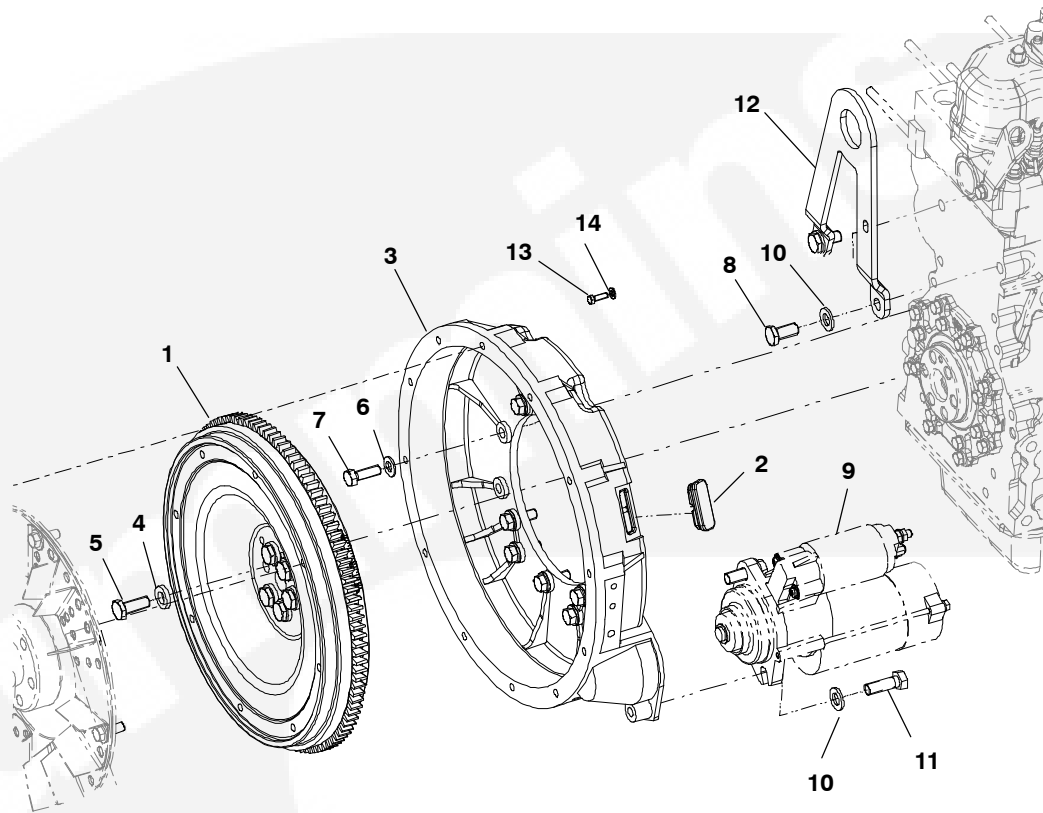
Item	Part No.	Description	Qty
1	132-0520	Pump Assy, Water (Includes Parts Marked *)	1
2	132-0446	*Flange, Pump Water	1
3	185-6007	*Bearing	1
4	132-0444	*Impeller, Water Pump	1
5	185-6978	*Seal, Mechanical	1
6	130-6347	*Flange, with Pump Shaft	1
7	132-0447	Gasket, Water Pump	1
8	185-2404	Bolt	2
9	520-2655	Stud	1
10	185-2386	Bolt	6
11	185-6957	Washer, Spring	1
12	185-2367	Nut	1
13	185-7013	Bolt, Flange	4
14	185-6013	Pulley	1

Water Pump HDKBR, HDKBV



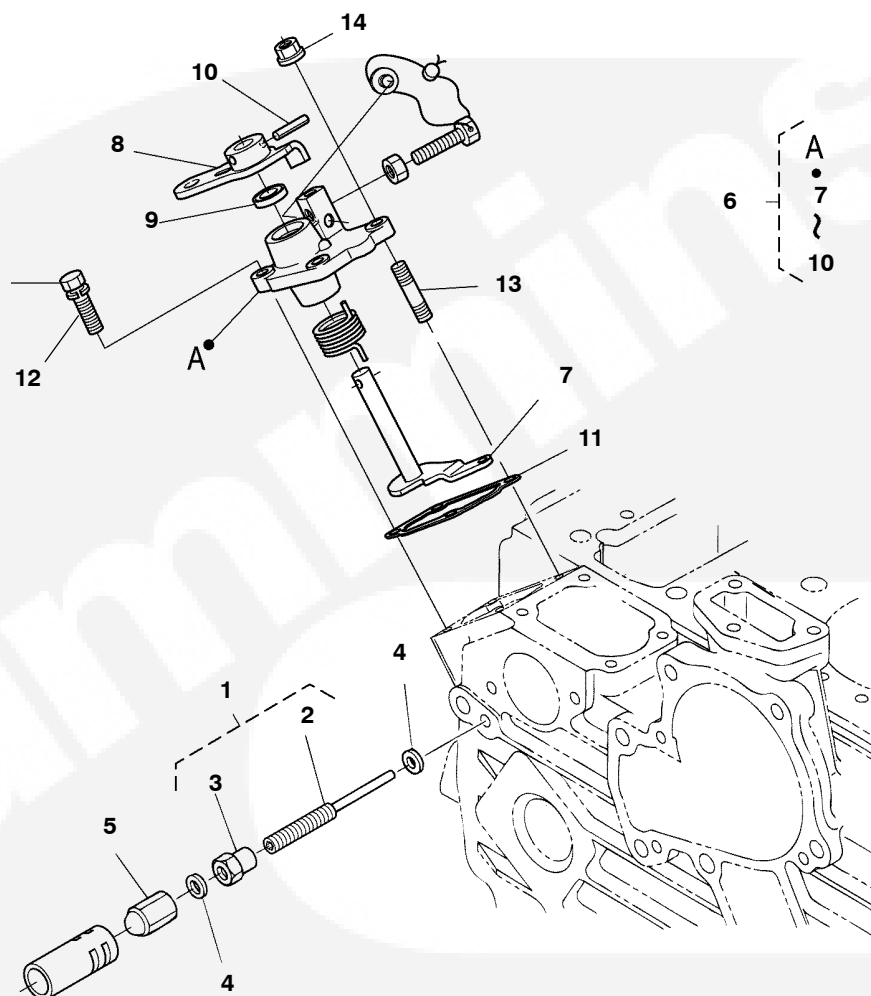
Item	Part No.	Description	Qty
1	132-0521	Pump Assy, Water (Includes Parts Marked *)	1
2	132-0446	*Flange, Pump Water	1
3	185-6007	*Bearing	1
4	132-0444	*Impeller, Water Pump	1
5	185-7021	*Seal, Mechanical	1
6	130-6347	*Flange, with Pump Shaft	1
7	132-0447	Gasket, Water Pump	1
8	185-2404	Bolt	2
9	185-6241	Stud	1
10	185-2389	Bolt	6
11	185-6957	Washer, Spring	1
12	185-2367	Nut	1
13	185-6445	Pipe, Water Return	1
14	185-7013	Bolt, Flange	4
15	185-6013	Pulley	1

Flywheel



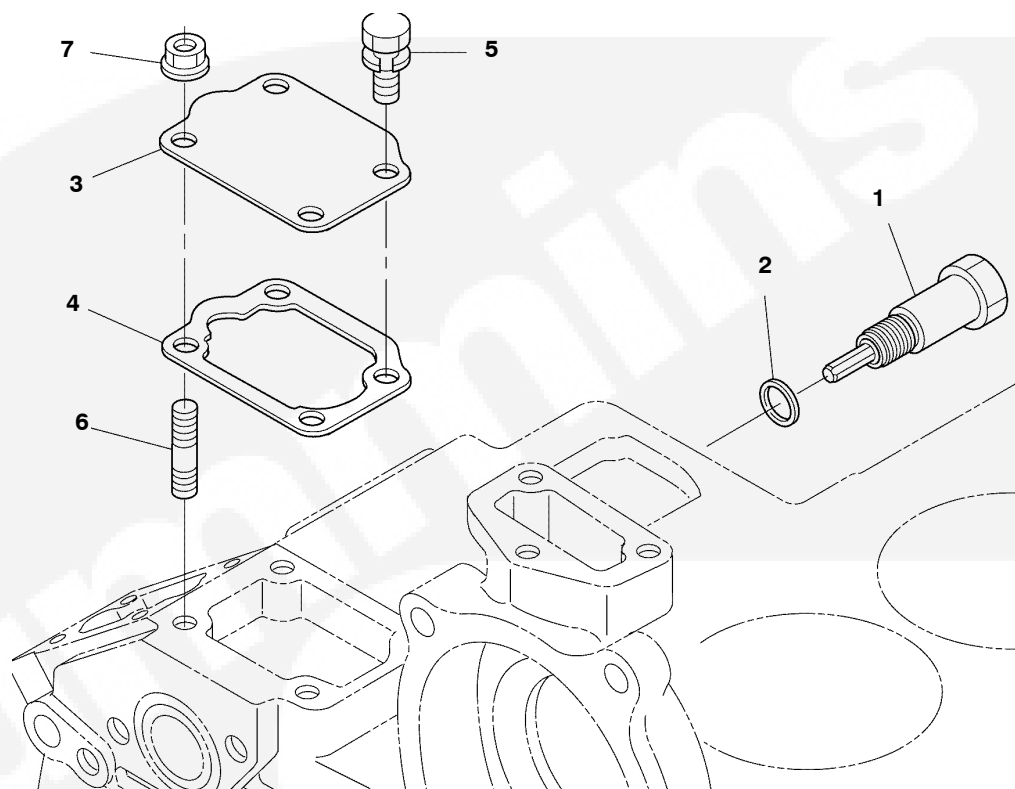
Item	Part No.	Description	Qty
1	104-2134	Flywheel (Includes Ring Gear)	1
2	101-0811	Plug, Hole	1
3	101-0821-S0	Adapter, Engine	1
4	526-0145	Washer, Flat (M12)	6
5	800-3032	Screw, Hex Head Cap (M12 x 1.25 x 30mm)	6
6	526-0399-62	Washer, Flat (M10)	11
7	800-3005	Screw, Hex Head Cap (M10 x 1.25 x 30mm)	11
8	800-3033	Screw, Hex Head (M21 x 1.25 x 25mm)	2
9		Starter	
	191-1959	12V	1
	191-1550	24V	1
10	526-2140	Washer, Flat (M12)	4
11	800-2113	Screw, Hex Head Cap (M12 x 1.75 x 35mm)	2
12	403-7060-02	Bracket, Engine Lifting	1
13	718-1035	Screw, Hex Head Cap (M8 x 1.25 x 16mm)	1
14	526-2100	Washer, Flat (M8)	1

Speed Control Plate



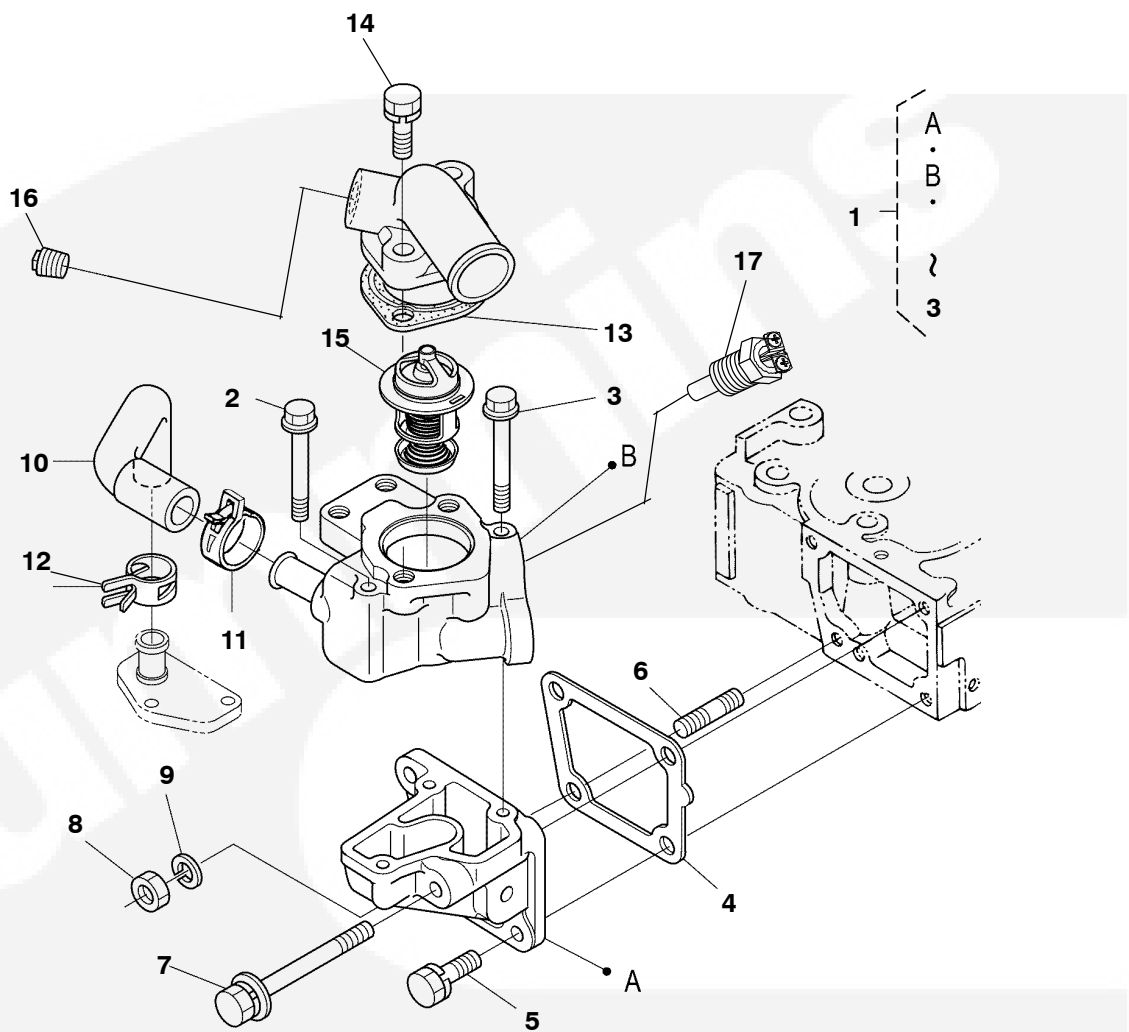
Item	Part No.	Description	Qty
1	150-2840	Bolt, Adjusting – Maximum Fuel	1
2	800-6307	Bolt, Adjusting	1
3	185-6164	Nut	1
4	185-2284	Gasket	2
5	185-5529	Nut	1
6	150-2981	Plate, Speed Control	1
7	150-2841	Comp Lever, Governor	1
8	152-0385	Lever, Speed Control	1
9	509-0558	Seal, Oil	1
10	185-2351	Pin, Spring	1
11	150-2844	Gasket, Plate	1
12	185-2388	Bolt	2
13	185-5727	Stud	2
14	185-7166	Nut, Flange	2

Idle



Item	Part No.	Description	Qty
1	150-2853	Apparatus, Idling	1
2	509-0418	Gasket	1
3	150-2979	Cover, Boost Comp Housing	1
4	150-2844	Gasket, Plate	1
5	185-2390	Bolt	2
6	181-9034	Stud	2
7	185-7166	Nut, Flange	2

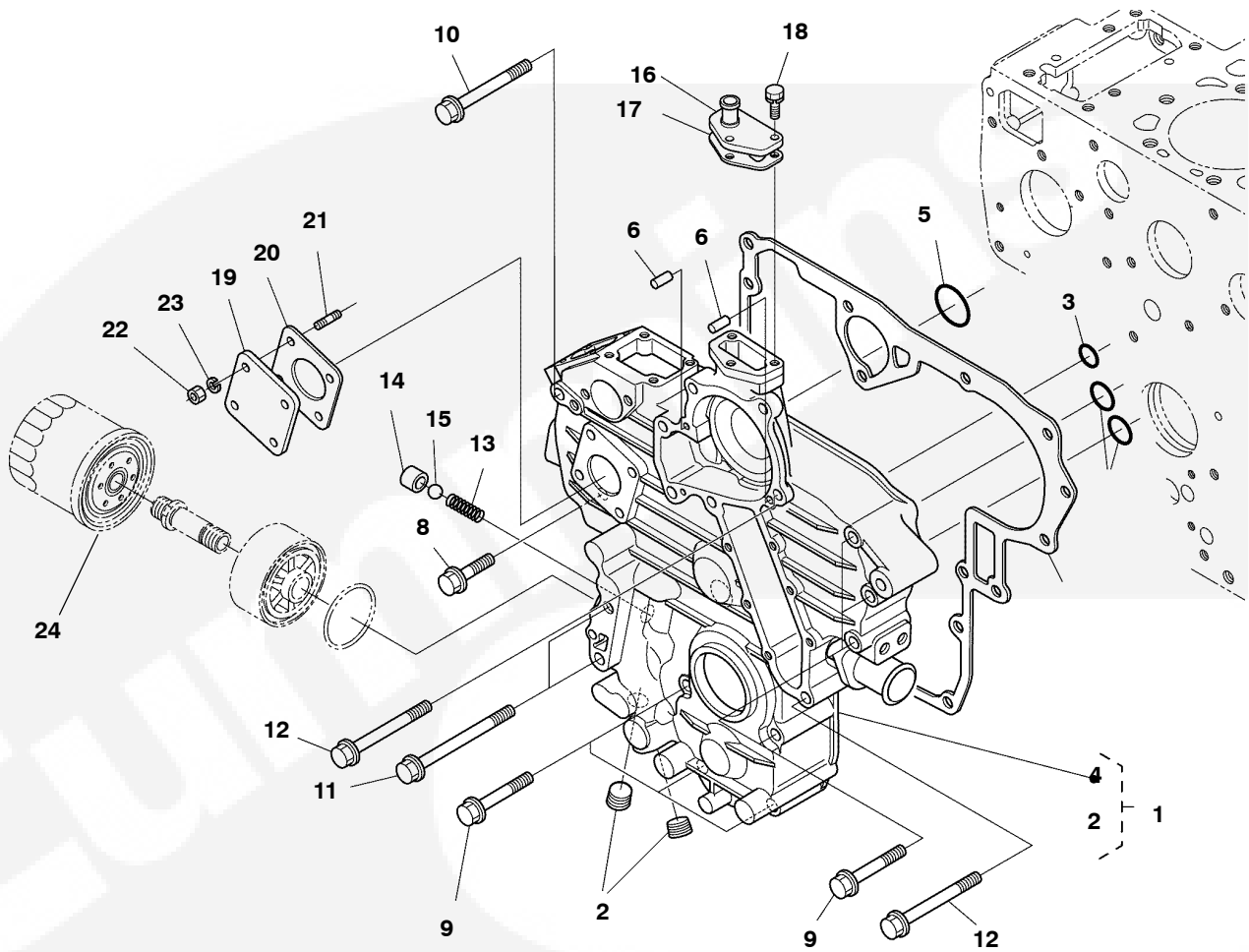
Water Flange



Water Flange

Item	Part No.	Description	Qty
1	130-8281	Flange, Water (Includes Water Return Pipe)	1
2	800-6331	Bolt, Flange	2
3	800-6332	Bolt, Flange	1
4	185-5999	Gasket, Water Flange	1
5	185-2401	Bolt	2
6	185-2106	Stud	1
7	800-6328	Bolt	1
8	185-2367	Nut	1
9	185-6957	Washer, Spring	1
10	503-2553	Pipe, Water Return	1
11	503-3142	Clamp, Hose	1
12	503-2552	Clamp, Hose	1
13	185-6004	Gasket, Thermostat	1
14	185-2565	Bolt	2
15	130-6329	Thermostat	1
16	514-0441	Plug	1
17	193-0318	Sender, Water Temperature (E2) (Negative Ground)	1

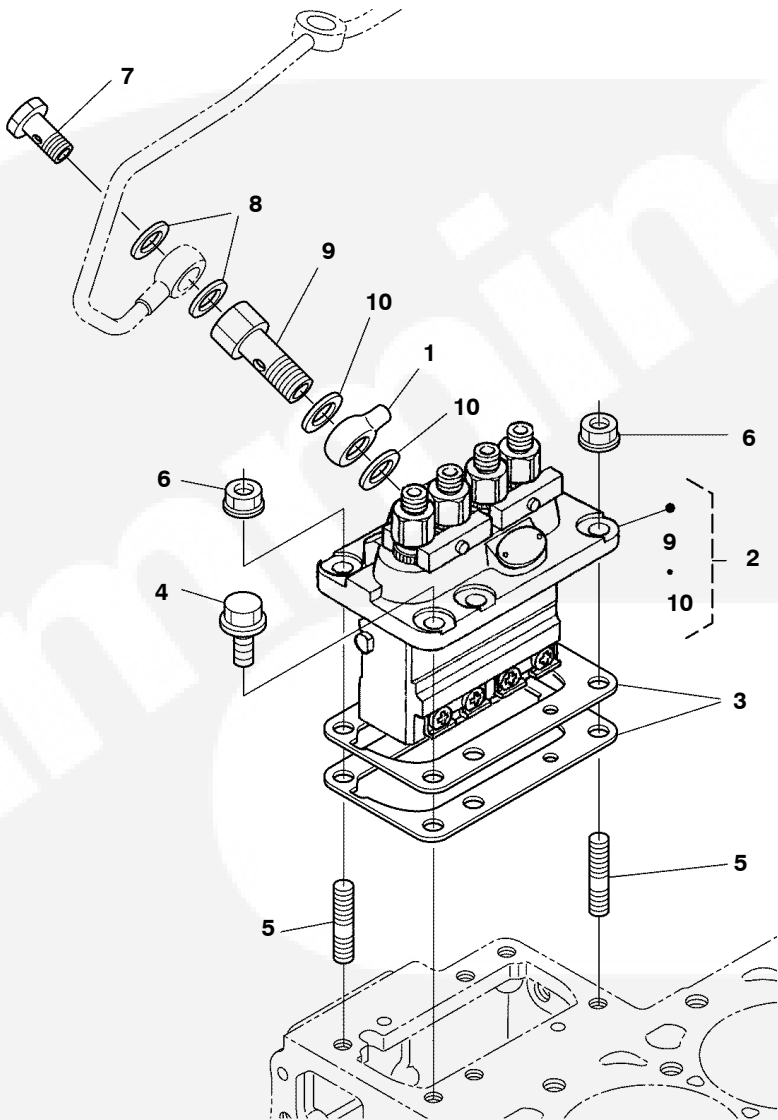
Gearcase



Gearcase

Item	Part No.	Description	Qty
1		Gearcase Assy (Includes Parts Marked *)	
	103-0869	HDKBP	1
	103-0864	HDKPR, HDKBV	1
2	185-6481	*Plug	2
3	509-0410	O'Ring	1
4	509-0412	O'Ring	2
5	509-0413	O'Ring	1
6	185-5843	Pin, Straight	2
7	103-0832	Gasket, Gear Case	1
8	800-6334	Bolt	1
9	815-1602	Bolt, Flanged	7
10	800-6414	Bolt	1
11	815-1598	Bolt, Flanged	2
12	815-1595	Bolt	4
13	185-5877	Spring	1
14	185-5878	Seat, Valve	1
15	185-6711	Ball	1
16	185-5879	Flange, Water Return	1
17	185-5880	Gasket, Water Return	1
18	185-2559	Bolt	3
19	185-2153	Cover	1
20	302-2084	Gasket, Hourmeter	1
21	181-9034	Stud	4
22	185-4255	Nut	4
23	185-6759	Washer, Spring	4
24	122-0810	Filter, Oil	1

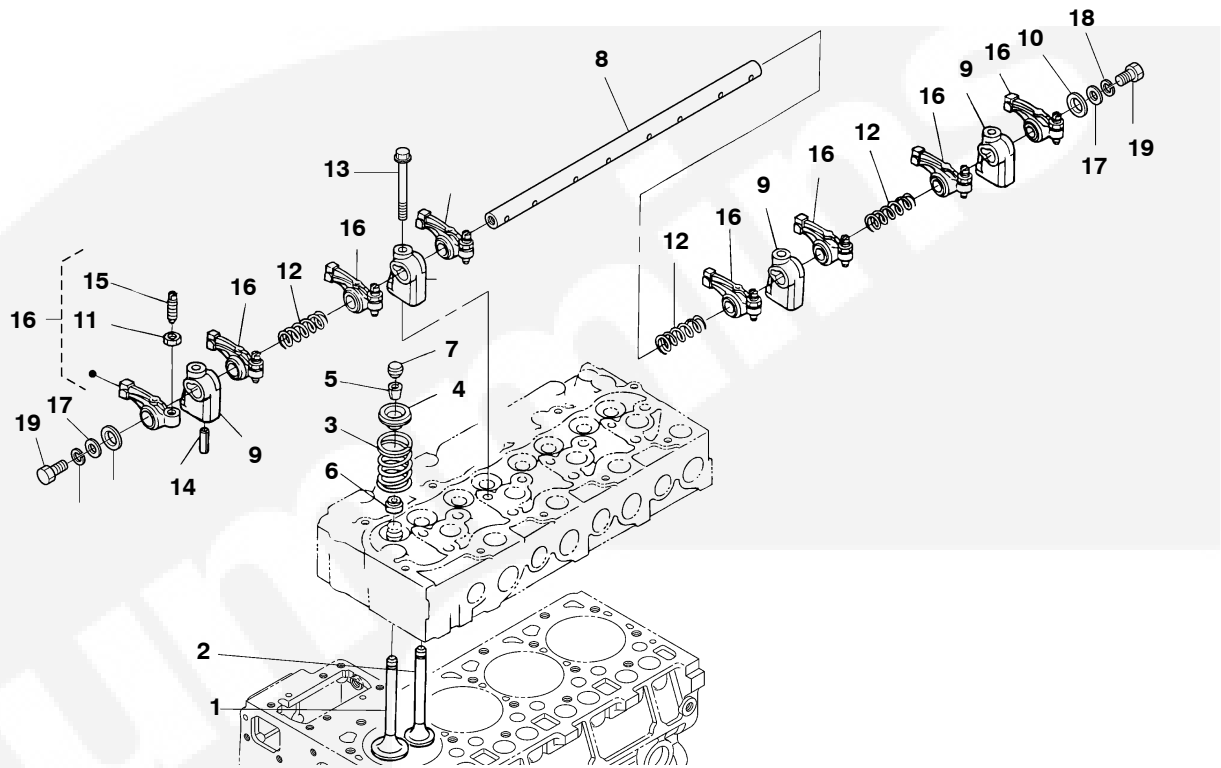
Injection Pump



Injection Pump

Item	Part No.	Description	Qty
1	185-6418	Joint	1
2	147-0902	Assy Pump, Injection	1
3		Shim, Injection Pump	
	147-0983	0.175mm	1
	185-6756	0.200mm	1
	185-6757	0.250mm	1
	185-6758	0.300mm	1
4	800-6333	Bolt, Flange	4
5	185-2106	Stud	2
6	185-7134	Nut, Flange	2
7	185-7045	Screw, Hollow	1
8	185-2578	Gasket	2
9	185-6153	Screw, Hollow	1
10	185-6154	Seat, Lower Spring	2

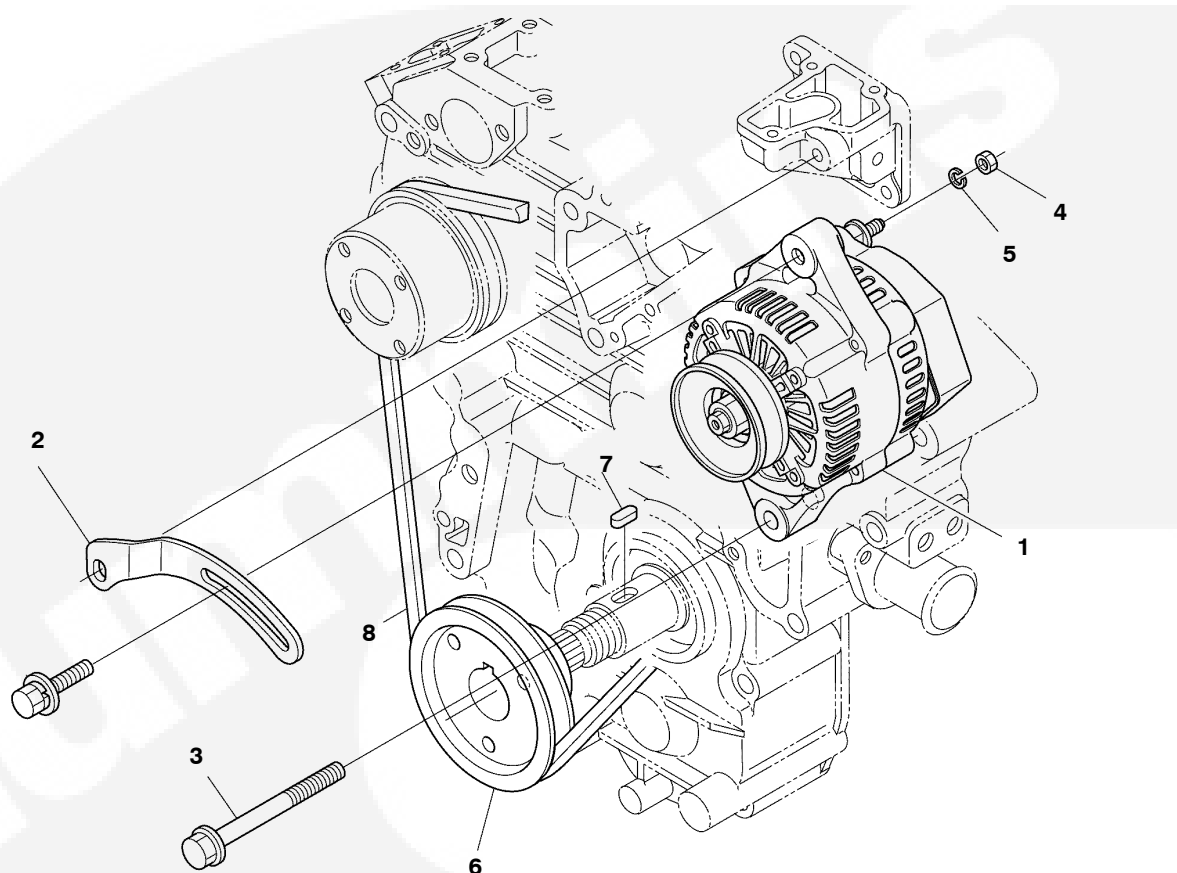
Valve and Rocker Arm



Valve and Rocker Arm

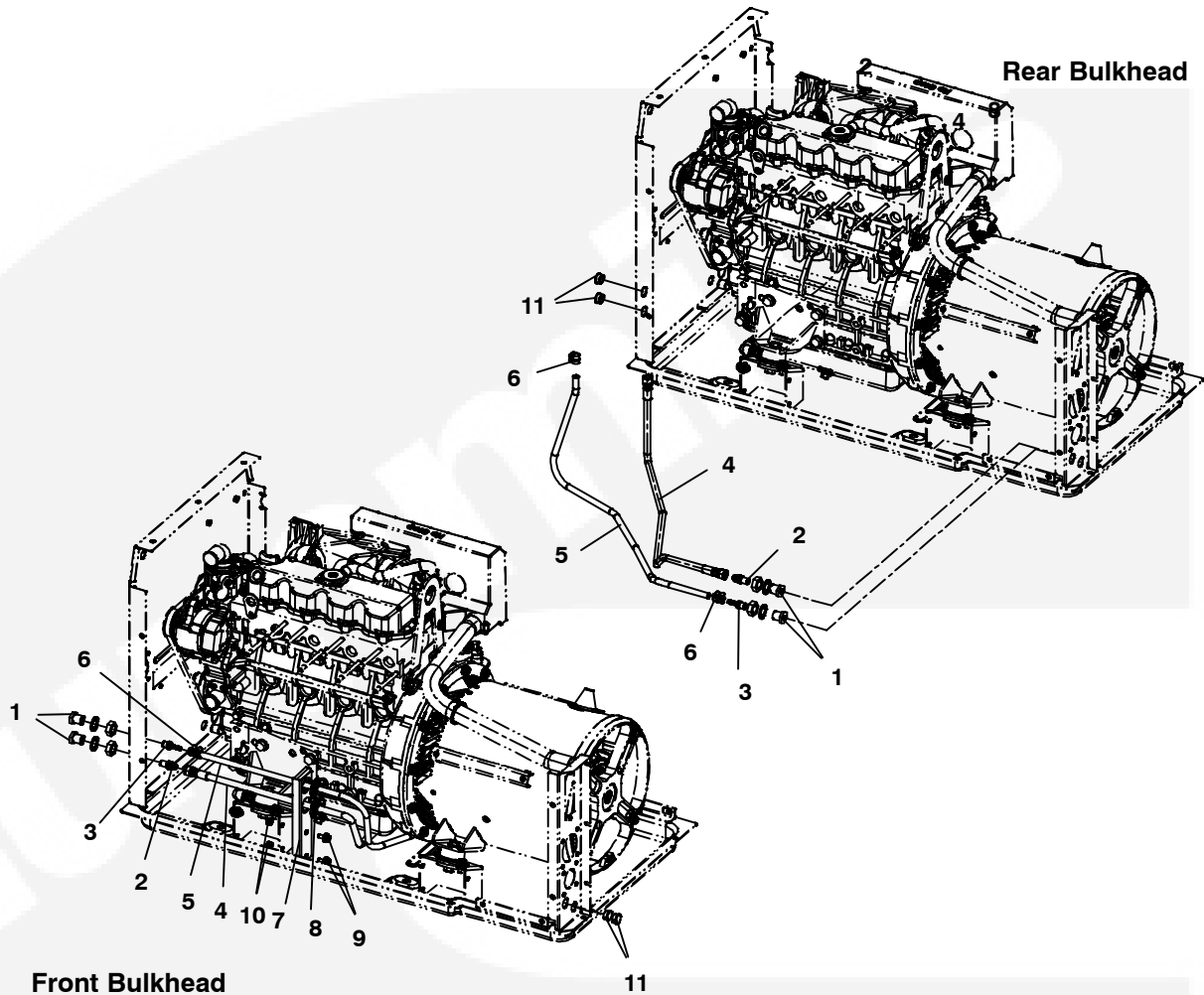
Item	Part No.	Description	Qty
1	110-4103	Valve, Inlet	4
2	110-4104	Valve, Exhaust	4
3	185-6016	Spring, Valve	8
4	185-6017	Retainer, Spring	8
5	110-3948	Collet, Valve Spring	8
6	185-6018	Seal, Valve Stem	8
7	185-6019	Cap, Valve	8
8	185-6020	Shaft, Rocker Arm (Includes Set Screws)	1
9	185-6022	Bracket, Rocker Arm	4
10	185-6026	Spring, Rocker Arm	3
11	800-6335	Bolt, Flange	4
12	185-6789	Pin, Spring	1
13	185-6025	Washer, Rocker Arm Shaft	2
14	185-7221	Washer, Plain	2
15	185-6957	Washer, Spring	2
16	185-6327	Bolt	2
17	185-6028	Assy, Rocker Arm	8
18	185-6029	Screw, Adjusting	8
19	185-6030	Nut	8

Alternator (12V and 24V)



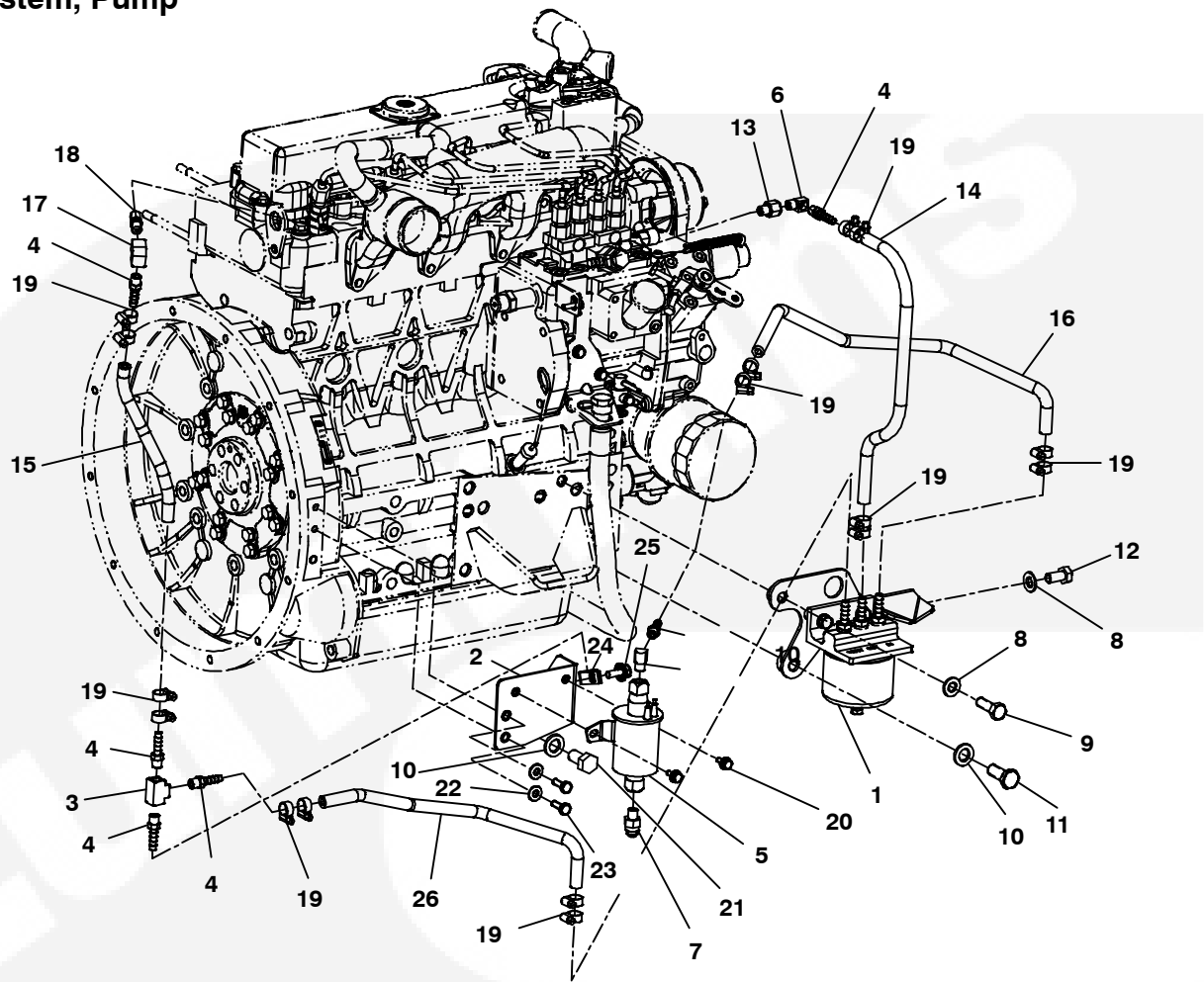
Item	Part No.	Description	Qty
1		Alternator (No Components Available)	
	185-5994	12V	1
	185-6724	24V	1
2		Bracket, Adjusting	
	191-2505	12V	1
	191-2506	24V	1
3	815-1596	Bolt	1
4	185-4255	Nut	1
5	185-6759	Washer, Sprint	1
6	512-0445	Pulley, Fan Drive	1
7	185-5905	Key	1
8		Belt	
	185-7016	12V	1
	511-0252	24V	1

Fuel System, Transfer



Item	Part No.	Description	Qty
1	502-1133	Coupling, Hose	2
2	502-1615	Coupling, Hose	1
3	502-1367-02	Connector, Hose	1
4	503-2588-04	Hose, Fuel	1
5	503-2935-02	Hose, Fuel	1
6	A034B591	Clamp, Hose	4
7	149-2759-03	Bracket	1
8	508-0117	Grommet, Rubber	1
9	821-6003-01	Screw, Hex Head	2
10	860-2008	Nut	2
11	517-0136-01	Plug, Hole	2

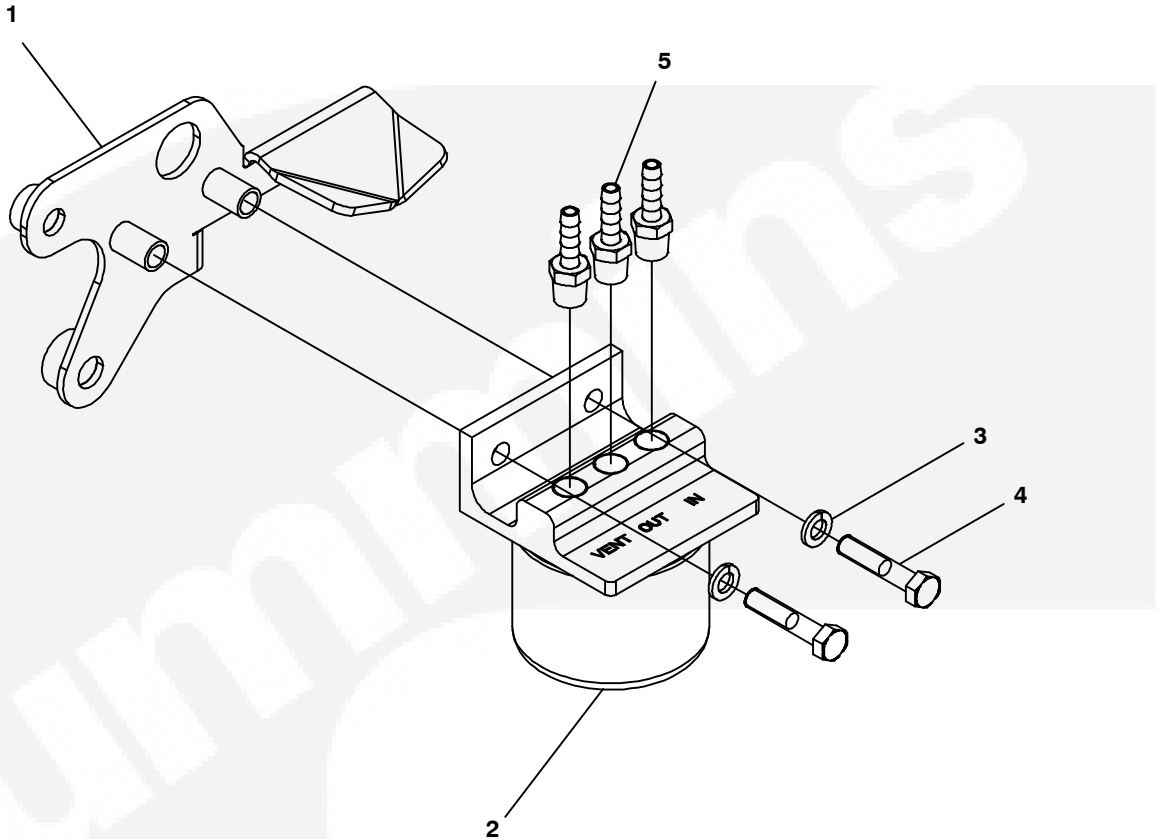
Fuel System, Pump



Fuel System Pump

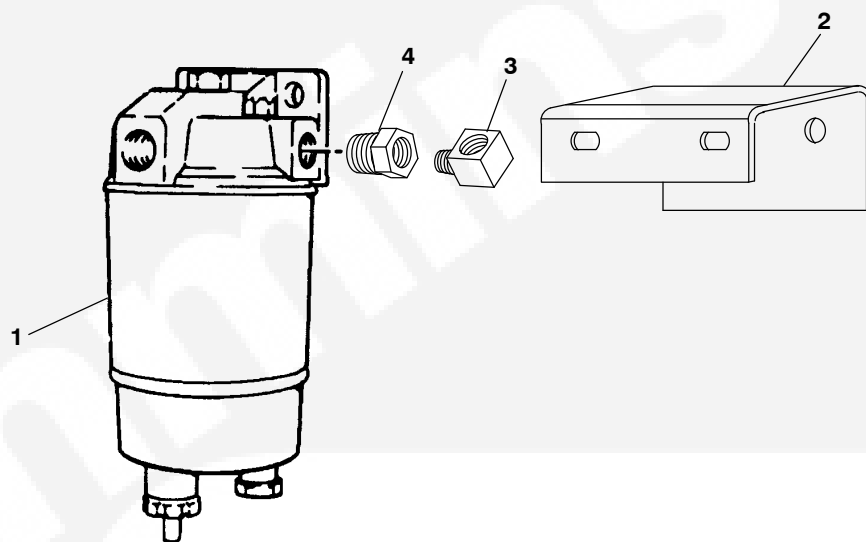
Item	Part No.	Description	Qty
1	A026K278	Filter, Fuel	1
2	149-2862-03	Bracket, Fuel Pump	1
3	502-0079	Tee, Street (1/8 NPT)	1
4	502-1367-02	Connector, Hose (1/4 NPT x 1/4 Hose)	6
5		Pump, Fuel	
	149-2646	12V	1
	149-2795	24V	1
6	502-0020-01	Elbow, Pipe	2
7	505-1490	Connector, Male	1
8	526-2120	Washer, Flat	2
9	800-3005	Screw, Hex Head	1
10	526-0399-64	Washer, Flat	2
11	800-3032	Screw, Hex Head	1
12	800-3030	Screw, Hex Head	1
13	502-0175	Adapter, Pipe	1
14	503-2883-08	Hose, Fuel	1
15	503-2883-01	Hose, Fuel	1
16	503-2883-12	Hose, Fuel	1
17	502-0055	Elbow, Pipe	1
18	502-1245	Adapter, Pipe	1
19	A034B591	Clamp, Hose	16
20	821-6002-02	Screw, Hex Head	2
21	800-3031	Screw, Hex Head	1
22	526-0399-13	Washer, Flat	2
23	800-0310-04	Screw, Hex Head	2
24	518-0548-08	Clamp	1
25	821-6003-01	Screw, Hex Head	1
26	503-2883-11	Hose, Fuel	1

Fuel System



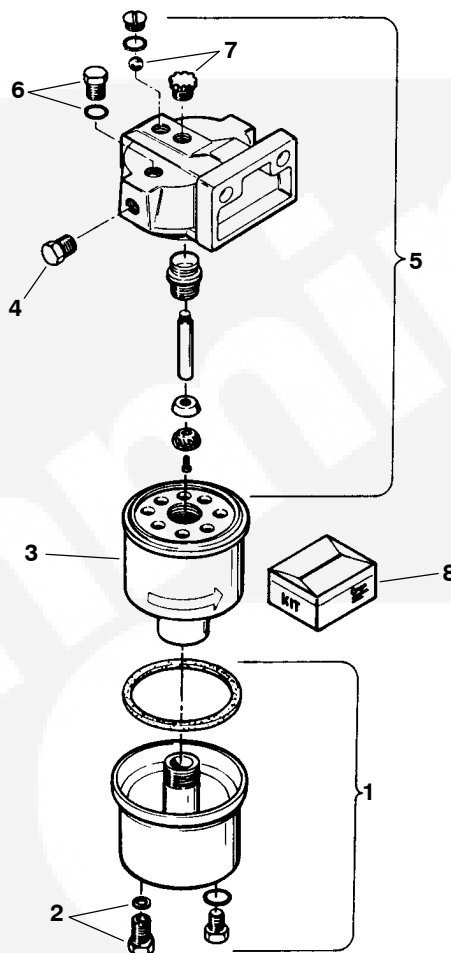
Item	Part No.	Description	Qty
1	149-2873-02	Bracket, Fuel Filter	1
2	149-2634-01	Filter, Fuel	1
3	850-2008	Washer, Lock	2
4	800-2061	Screw, Hex Head	2
5	502-1367-02	Fitting, Hose Connector	3

Remote Water Sparator Kit



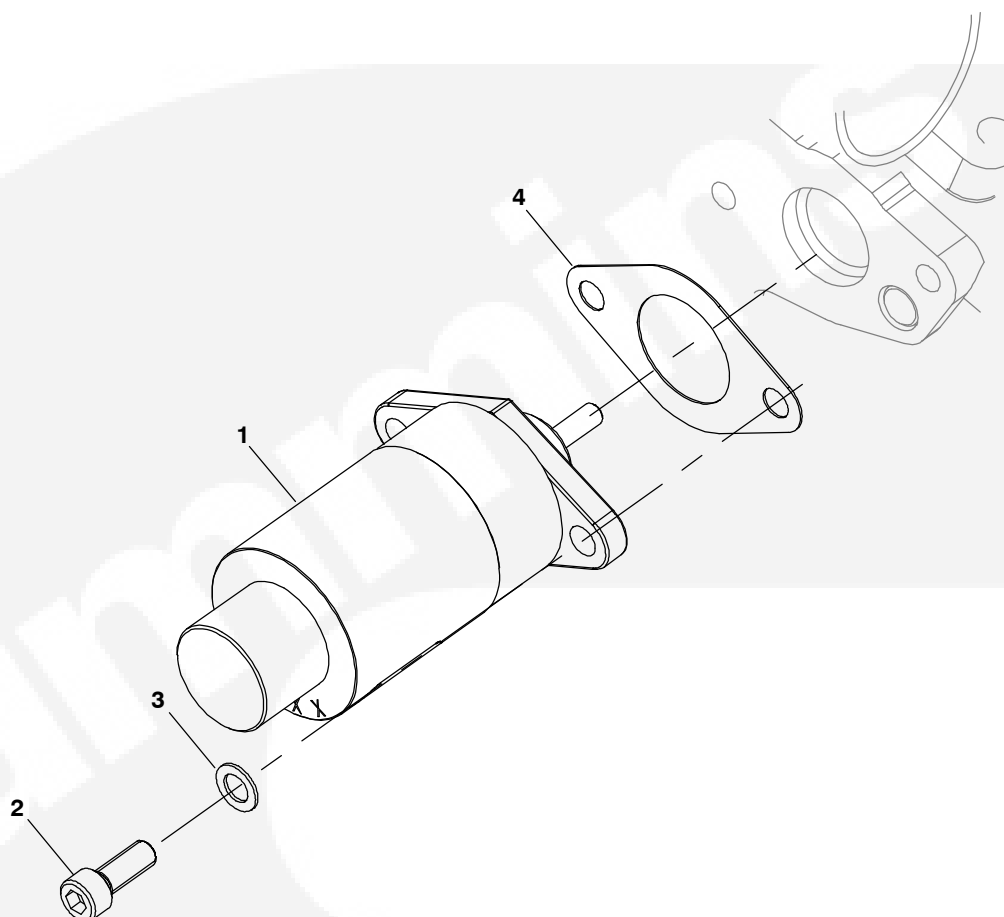
Item	Part No.	Description	Qty
	A026M935	Kit, Remote Fuel/Water Separator	1
1	A026M941	Separator, Fuel/Water (See Separate Page for Components)	1
2	149-2041-03	Bracket, Separator Mounting	1
3	502-0020-01	Elbow, Street 90°	1
4	502-0029	Bushing, Pipe	2

Remote Water Sparator Kit



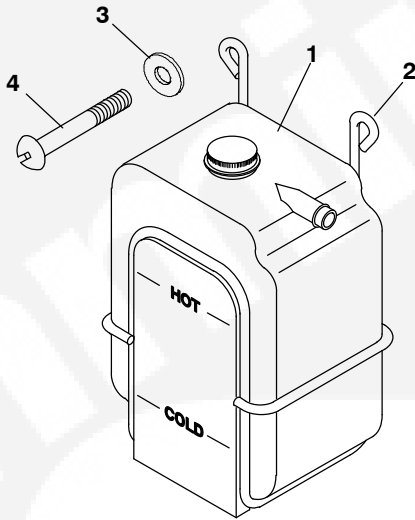
Item	Part No.	Description	Qty
	A026M941	Separator, Water	1
1	149-2046	Kit, Metal Bowl Replacement (Includes Plug, O'Rings and Drain Assy)	1
2	149-1953	Assy, Drain (Includes Knob and Seal)	1
3	149-1914-01	Element (Includes Seals)	1
4	502-0153	Plug, Hex (1/4")	1
5	149-1949	Assy, Replacement Head (Includes Vent Plug, O'Rings, Assy)	1
6	149-1952	Plug, Vent (Includes O'Ring)	1
7	149-2047	Assy, Pump (Includes O'Ring)	1
8	149-2045	Kit O'Ring (Includes Seal and Plunger)	1

Governor Actuator



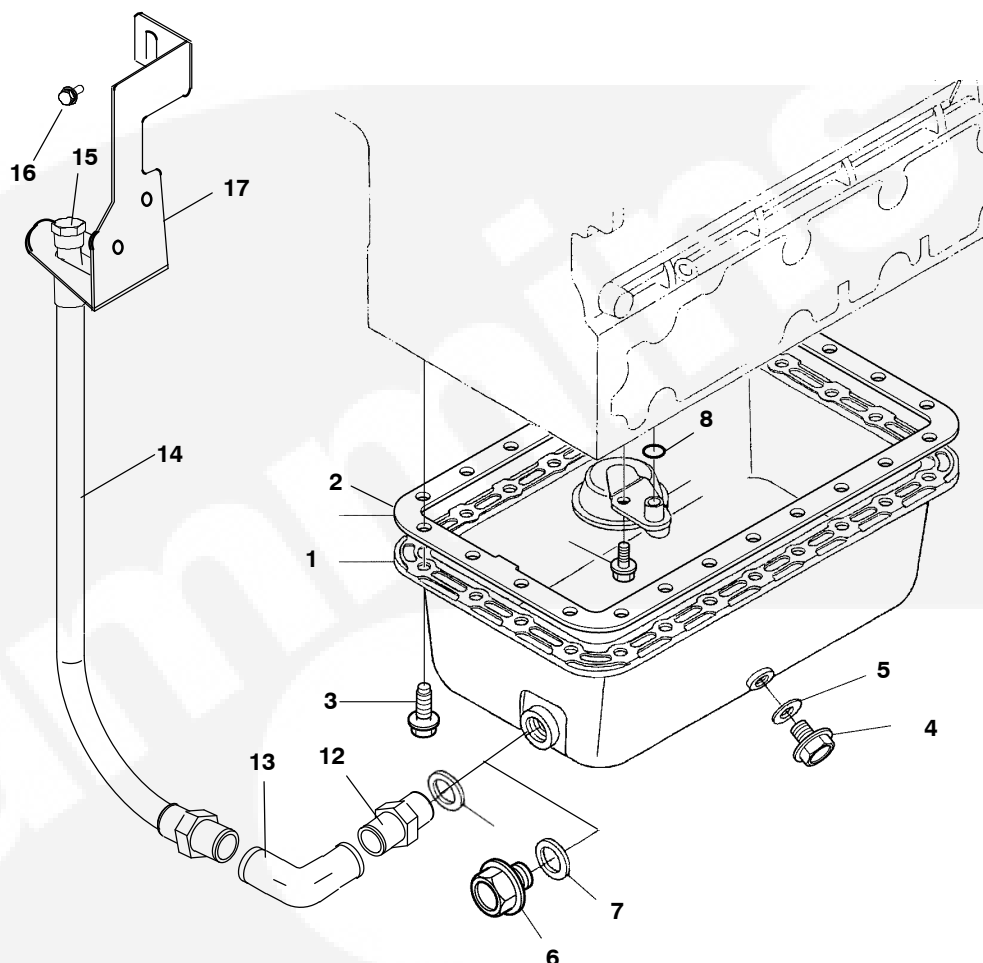
Item	Part No.	Description	Qty
1		Actuator, Governor	
	306-5316-01	12V	1
	306-5316-02	24V	1
2	725-1027	Screw, Slotted Head Cap (M6 x 1 x 16mm)(1/32")	2
3	526-0063	Washer, Copper	2
4	150-2918	Gasket, Solenoid Cover	1

Cooling System



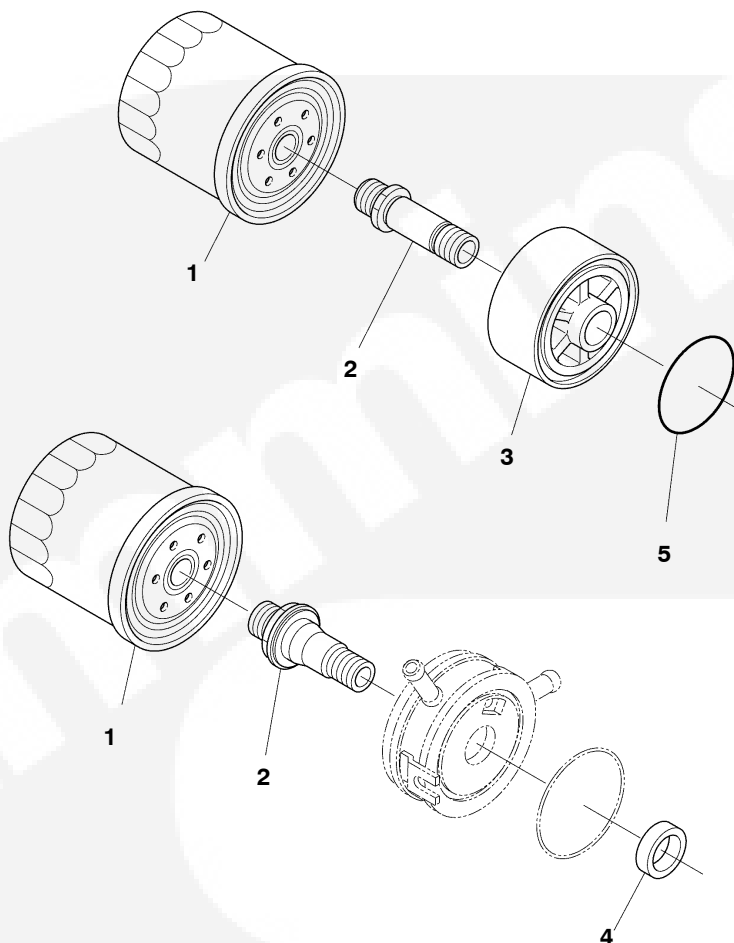
Item	Part No.	Description	Qty
	130-2781	Kit, Coolant Recovery	1
1	130-2779	Tank, Water Recovery	1
2	130-2780	Bracket, Tank	1
3	808-0054	Screw, Round Head Metal (7/8" x 14")	2
4	526-0021	Washer, Flat	2

Oil Pan



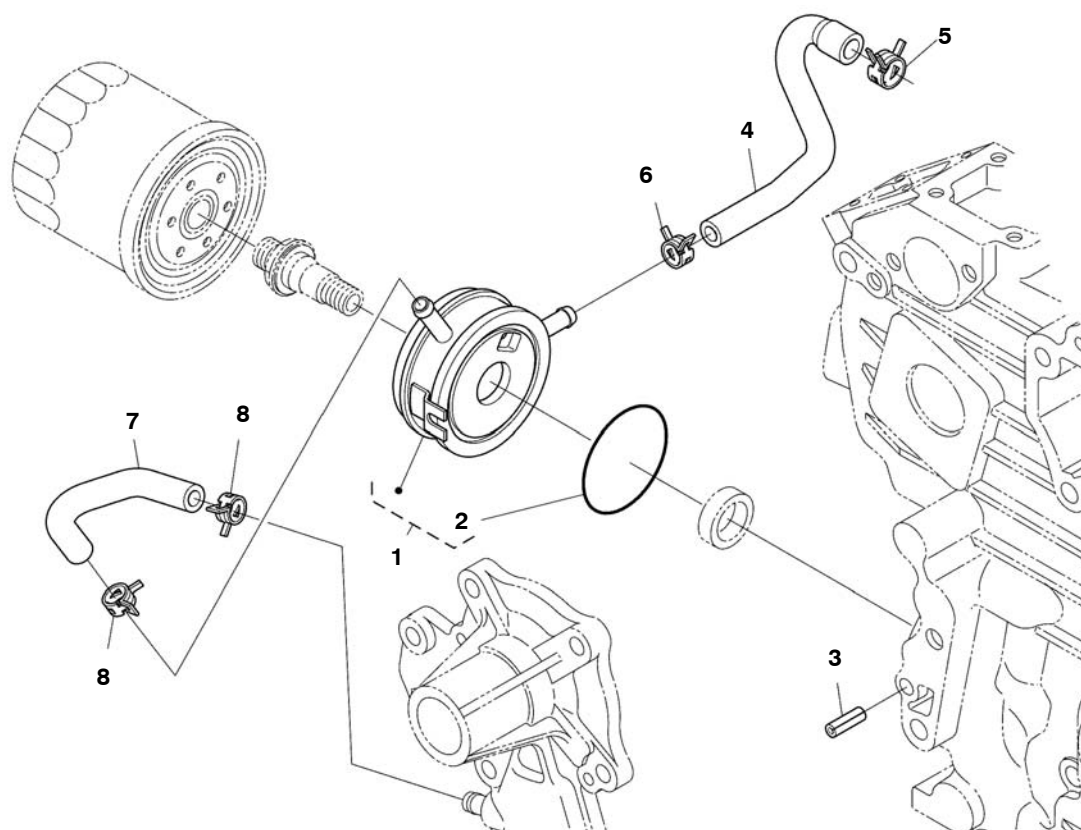
Item	Part No.	Description	Qty
1	185-6727	Pan, Oil	1
2	185-5854	Gasket	1
3	815-1601	Bolt, Flanged	4
4	517-0418	Plug, Drain	1
5	509-0428	Gasket	1
6	185-6760	Plug, Drain	1
7	185-6761	*Gasket	1
8	509-0411	O'Ring	1
9	185-6728	Tube, Oil Pickup	1
10	185-2573	Bolt	1
11	526-0413	Washer	1
12	102-1449-01	Adapter, Oil Drain	1
13	502-0263	Elbow, 90	1
14	501-0910	Hose, Assy	1
15	502-1123	Cap, Pipe	1
16	821-6002-03	Screw, Hex Head Sems (M6 x 1.0 x 16mm)	3
17	120-1387-03	Bracket, Oil Drain	1

Oil Filter Assembly



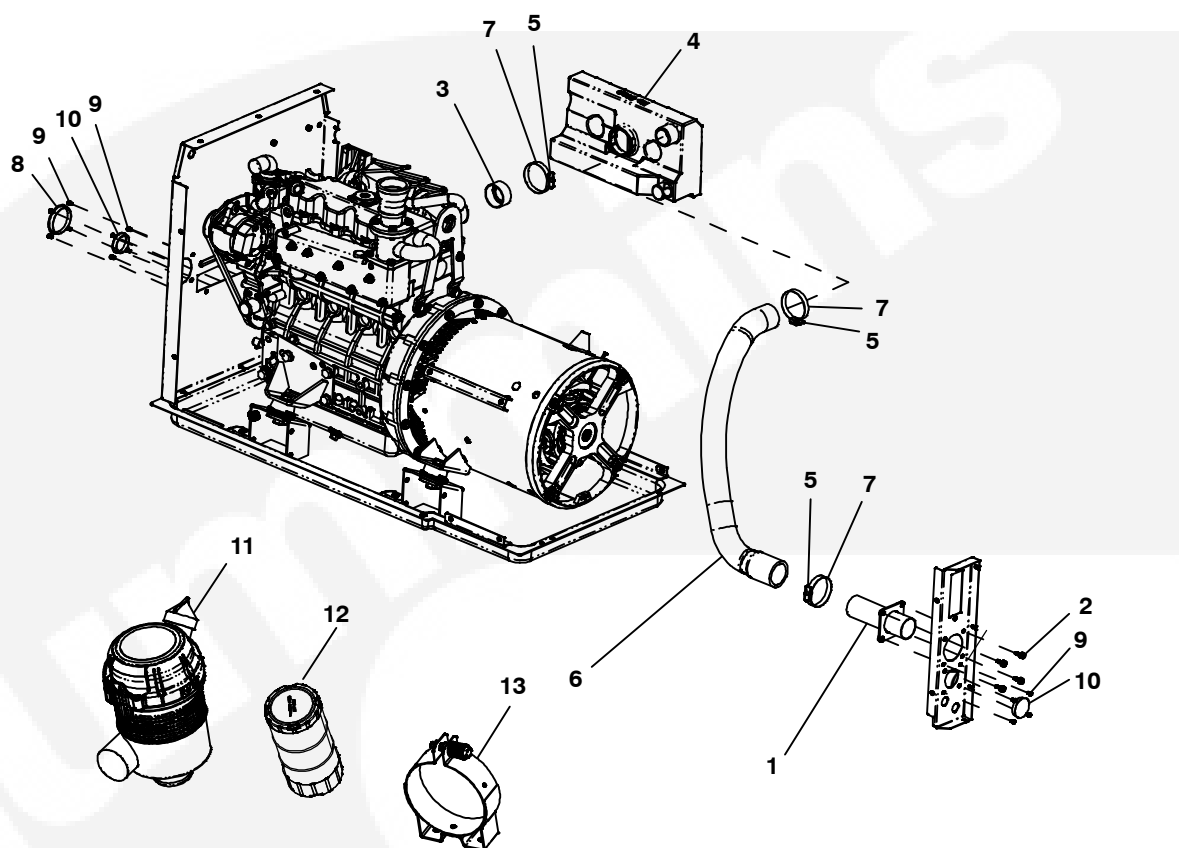
Item	Part No.	Description	Qty
1	122-0893	Filter, Oil	1
2		Connector	
	122-0942	HDKBP	1
	122-0944	HDKBR, HDKBV	1
3	122-0943	Spacer (HDKBP)	1
4	508-1341	Collare (HDKBR, HDKBV)	1
5	122-0886	O'Ring	1

Oil Cooler



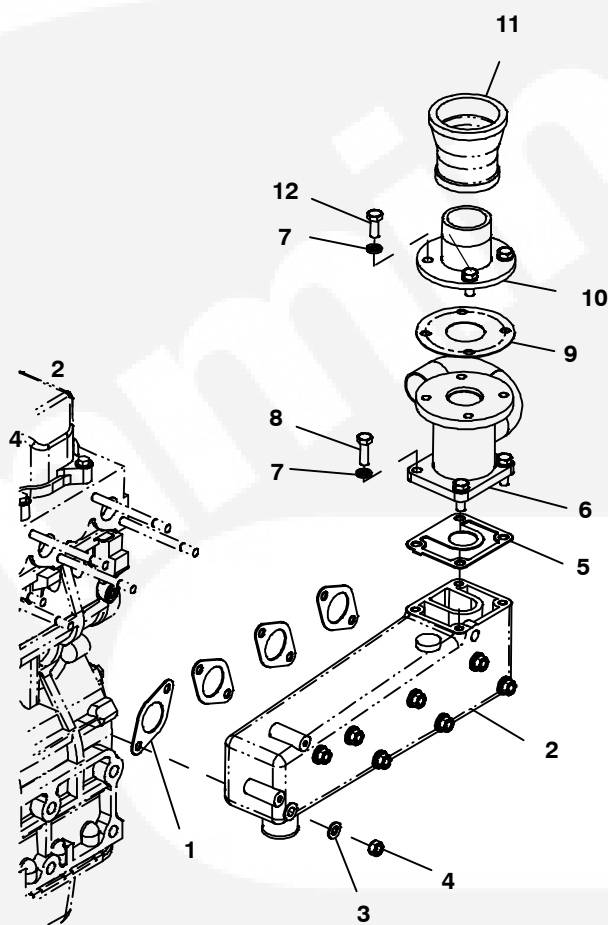
Item	Part No.	Description	Qty
1	102-1567	Cooler, Oil	1
2	509-0554	O'Ring	1
3	516-2145	Pin, Spring	1
4	503-3134	Hose, Oil Cooler	1
5	503-2552	Clamp, Hose	1
6	185-6667	Clamp, Hose	1
7	503-3129	Hose, Oil Cooler	1
8	185-6667	Clamp, Hose	2

Resonator



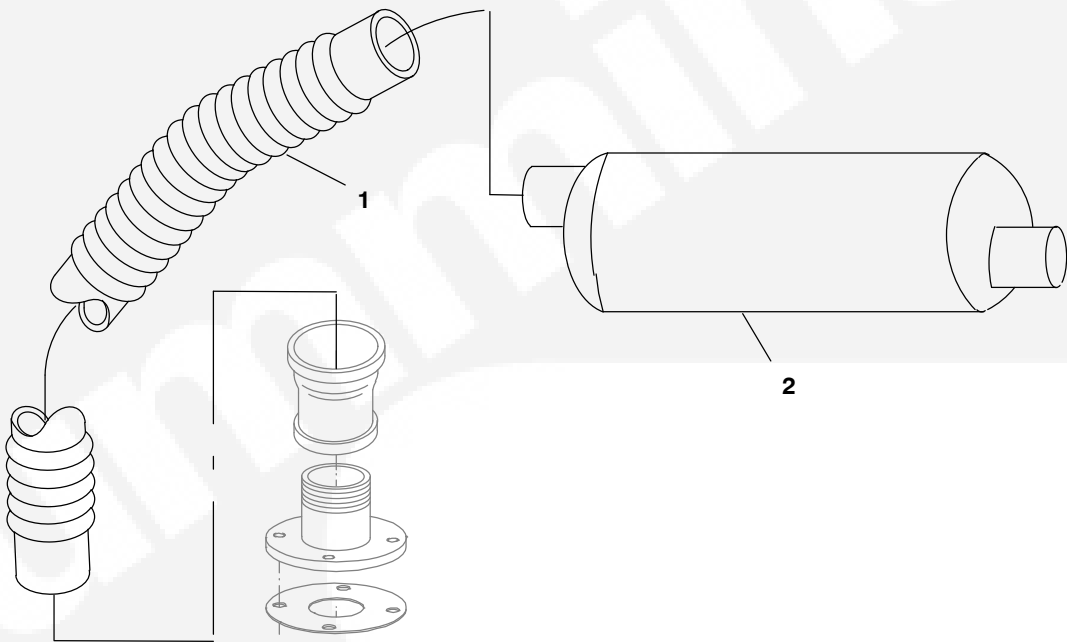
Item	Part No.	Description	Qty
1	404-0057	Bulkhead	1
2	A030B088	Screw, Hex Head	4
3	140-3048	Sleeve, Air Intake	1
4	A034X826	Resonator, Intake	1
5	503-2823	Clamp, Hose	3
6	A034T423	Hose, Intake	1
7	503-1142	Clamp	3
8	517-0138-09	Plug, Hole (Spec A Only)	1
9		Plug, Hole	
	517-0131-02	Spec A	12
	517-0131-02	Spec B	4
10		Plug, Hole	
	517-0138-07	Spec A	2
	517-0138-07	Spec B	1
11	140-4177	Filter, Air Assy	1
12	A026L076	Filter, Air	1
13	140-4178	Bracket, Mounting	1

Exhaust Manifold



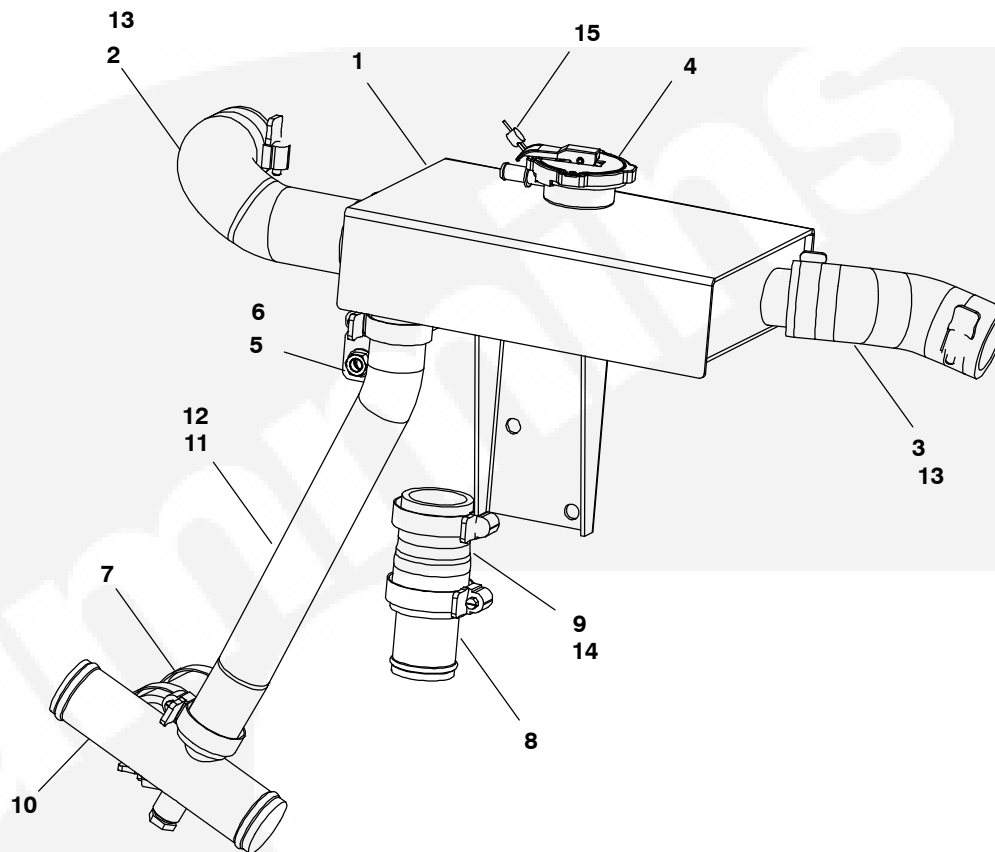
Item	Part No.	Description	Qty
1	154-2915	Gasket , Exhaust Manifold	4
2	154-2887	Manifold	1
3	526-2100	Washer, Flat	8
4	750-1006	Nut	8
5	155-2975	Gasket	1
6	A041N328	Adapter, Exhaust	1
7	850-2008	Washer, Lock	8
8	800-2058	Screw, Hex Head	4
9	155-2981	Gasket	1
10	155-3069-02	Flange, Exhaust	1
11	505-0339-02	Coupling, Reducer	1
12	800-2057	Screw, Hex Head	4
13	332-1355	Terminal, Tab	1

Muffler



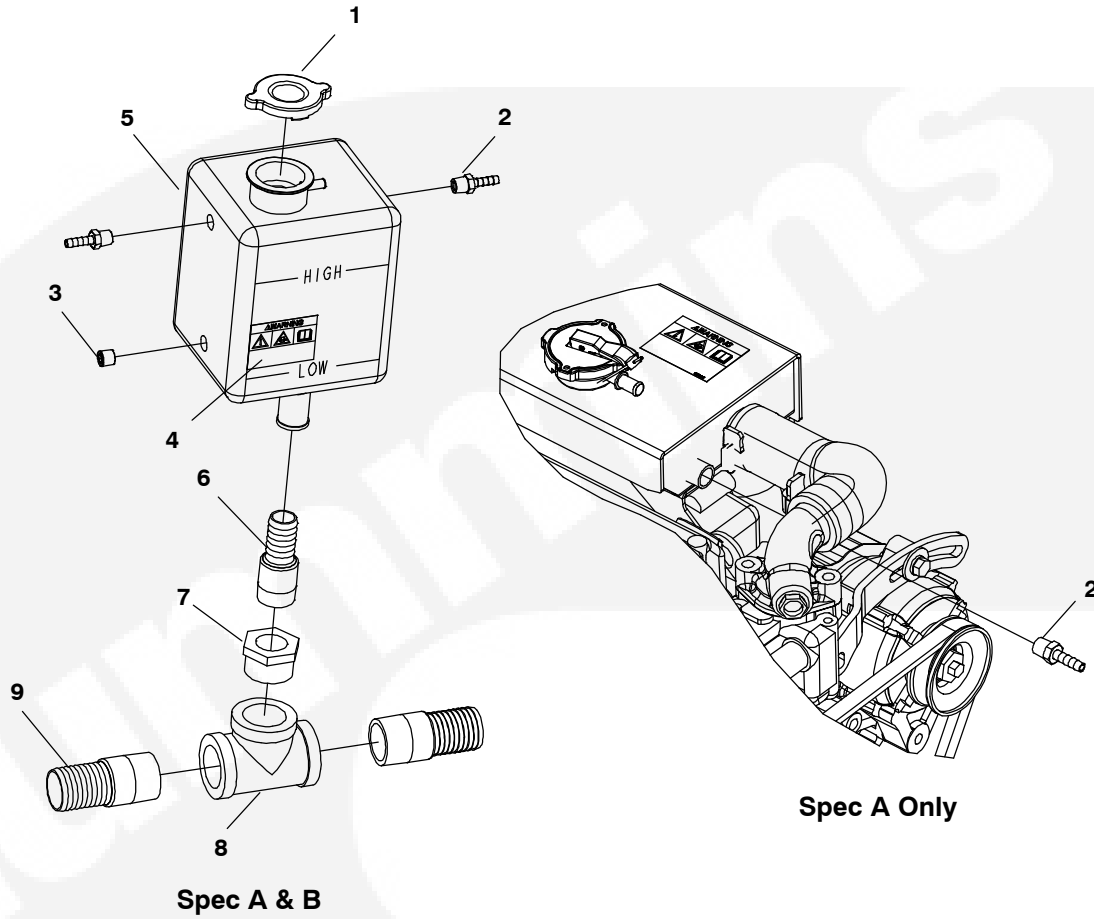
Item	Part No.	Description	Qty
1	155-2355-04	Tube, Flexible Exhaust (2")	1
2		Muffler, Dry Exhaust (Up) (2")	
	155-2063-09	Industrial	1
	155-2064-09	Critical	1

Engine Cooling System Connections (Spec A)



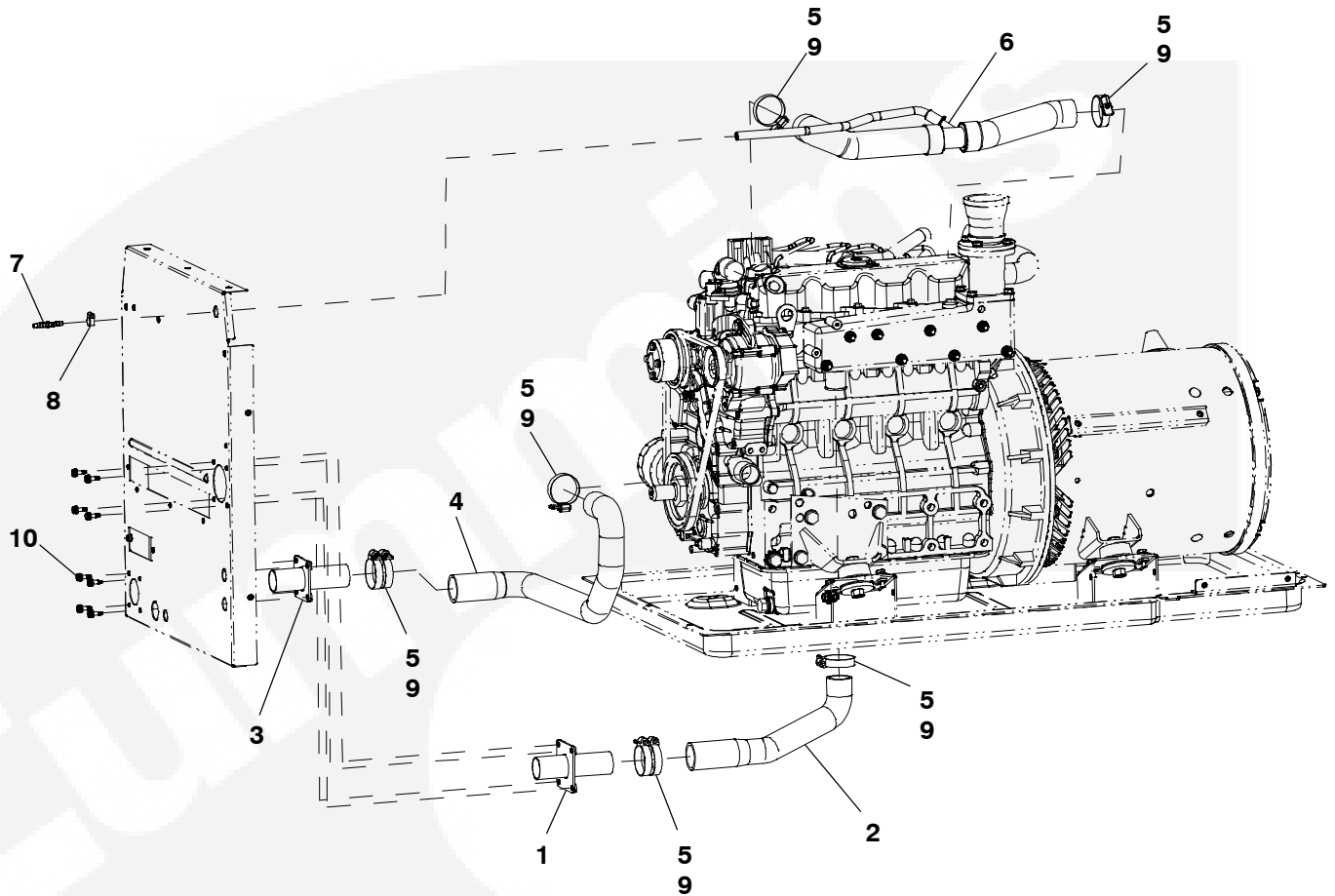
Item	Part No.	Description	Qty
1	130-7881-02	Tank, Coolant	1
2	503-1898	Hose, Coolant	1
3	503-1899	Hose, Coolant	1
4	A041H125	Cap, Radiator	1
5	526-2100	Waher, Flat	1
6	750-1006	Nut	1
7	503-2023	Hose, Coolant	1
8	A040A893	Adapter, Hose	1
9	A040A889	Hose, Coolant	1
10	A040A891	Adapter, Hose	1
11	A040A887	Hose, Coolant	1
12	503-1137	Clamp	2
13	503-1138	Clamp	4
14	503-1139	Clamp	4
15	880-0283	Seal, Wire	1
16	503-2823	Clamp, Hose (used on all hose clamps)	10

Engine Cooling System Connections (Spec A and B)



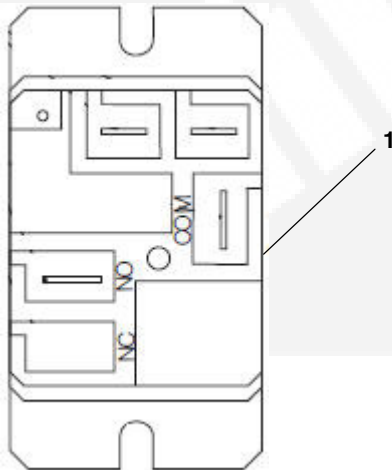
Item	Part No.	Description	Qty
1	130-3721	Cap, Radiator	1
2	502-1367-02	Connector, Hose	3
3	505-2035-02	Plug, Pipe	1
4	098-7871	Label, Warning	1
5	A041B576	Coolant, Tank	1
6	505-0759	Combination, Nipple	1
7	505-0023	Bushing, Reducer	1
8	A034C561	Titting, Pipe Tee	1
9	A041U275	Fitting, Hose Barb	2

Engine Cooling System Connections (Spec B)



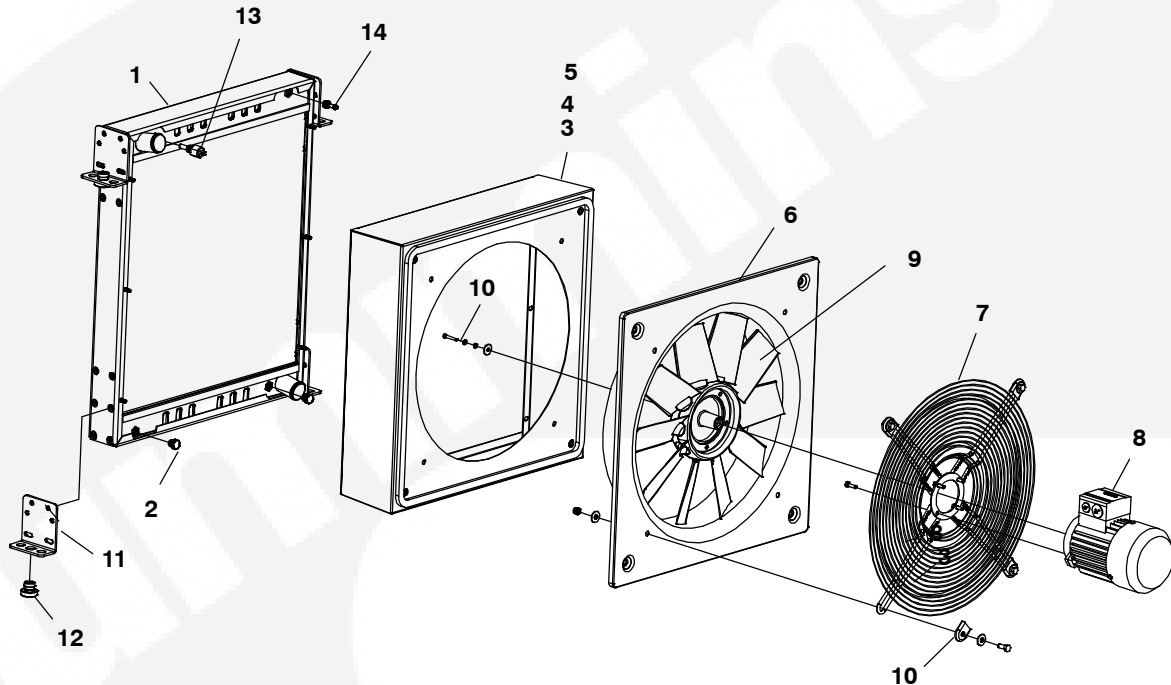
Item	Part No.	Description	Qty
1	A045C423	Adapter, Bulkhead	1
2	A044V390	Hose, Coolant	1
3	A045C431	Adapter, Bulkhead	1
4	A044V392	Hose, Coolant	1
5	503-1139	Clamp	8
6	A044E216	Hose, Coolant	1
7	A045F509	Fitting, Straight Hose	1
8	A034B591	Clamp, Hose	1
9	503-2823	Clamp, Hose	8
10	A030B088	Screw, Hex Head	8

Engine Cooling System Connections (Electrical)



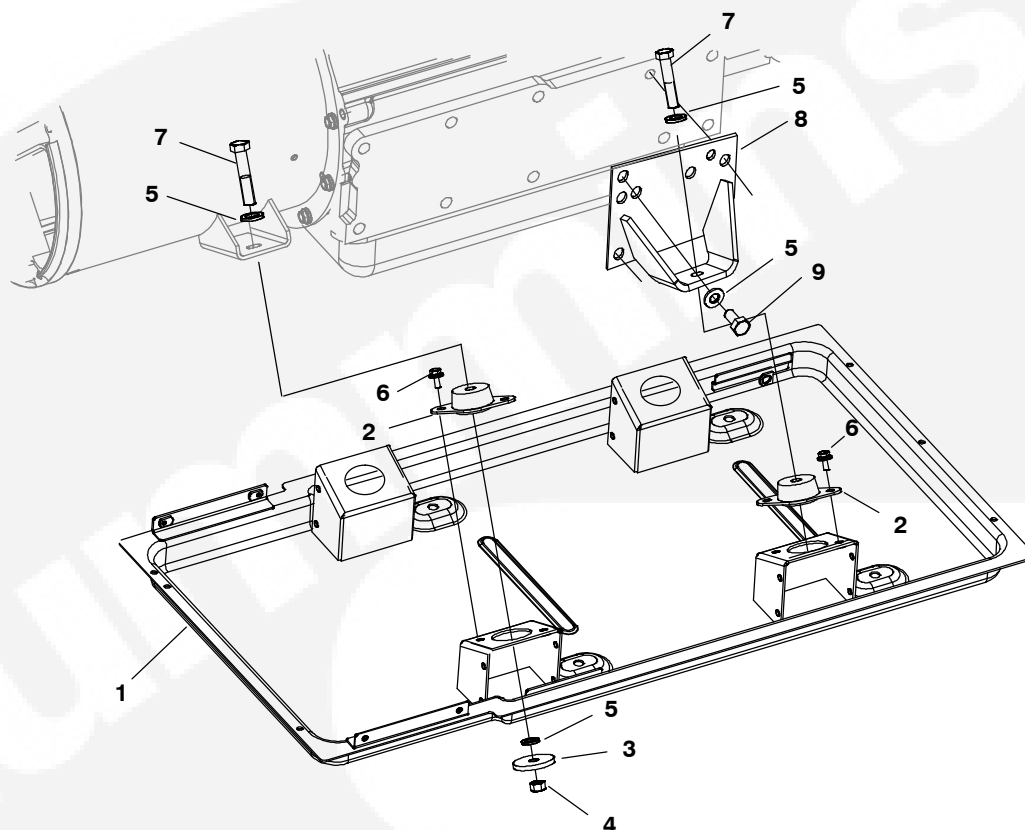
Item	Part No.	Description	Qty
1		Relay	
	A040S618	12V	1
	A040S621	24V	1

Remote Heat Exchanger



Item	Part No.	Description	Qty
	A040S616	Cooler, Remote	1
1	A042S560	Radiator (Including Frame)	1
2	A042S565	Plug, Drain	2
3	A042S567	Seal, Foam (Radiator to Fan Assy (Mounting Shroud)) (1.5M x 5mm x 15mm)	1
4	A042T135	Assy, Fan (Mounting Shroud)	1
5	A042S569	Seal, Foam (Fan Assy (Mounting Shroud) to fan Motor Mounting Plate (3M x 10mm x 15mm)	1
6	A042V307	Plate, Fan Motor Mounting	1
7	A042V314	Guard, Fan	1
8	A042V318	Motor, Fan	1
9	A042V327	Impeller, Fan	1
10	A043C880	Hardware, Fan Assembly	1
11	A042S573	Bracket, Mounting/ Lifting	4
12	A042S575	Isolator, Vibration	4
13	A042S577	Switch, Temperature	1
14	A042S588	Barb, Air Vent (Radiator)	1
15	A042S594	Package, Warning Label (Includes Lifting, Fan, High Temp and Electrical Shock Labels Not Shown)	1

Mounting Base

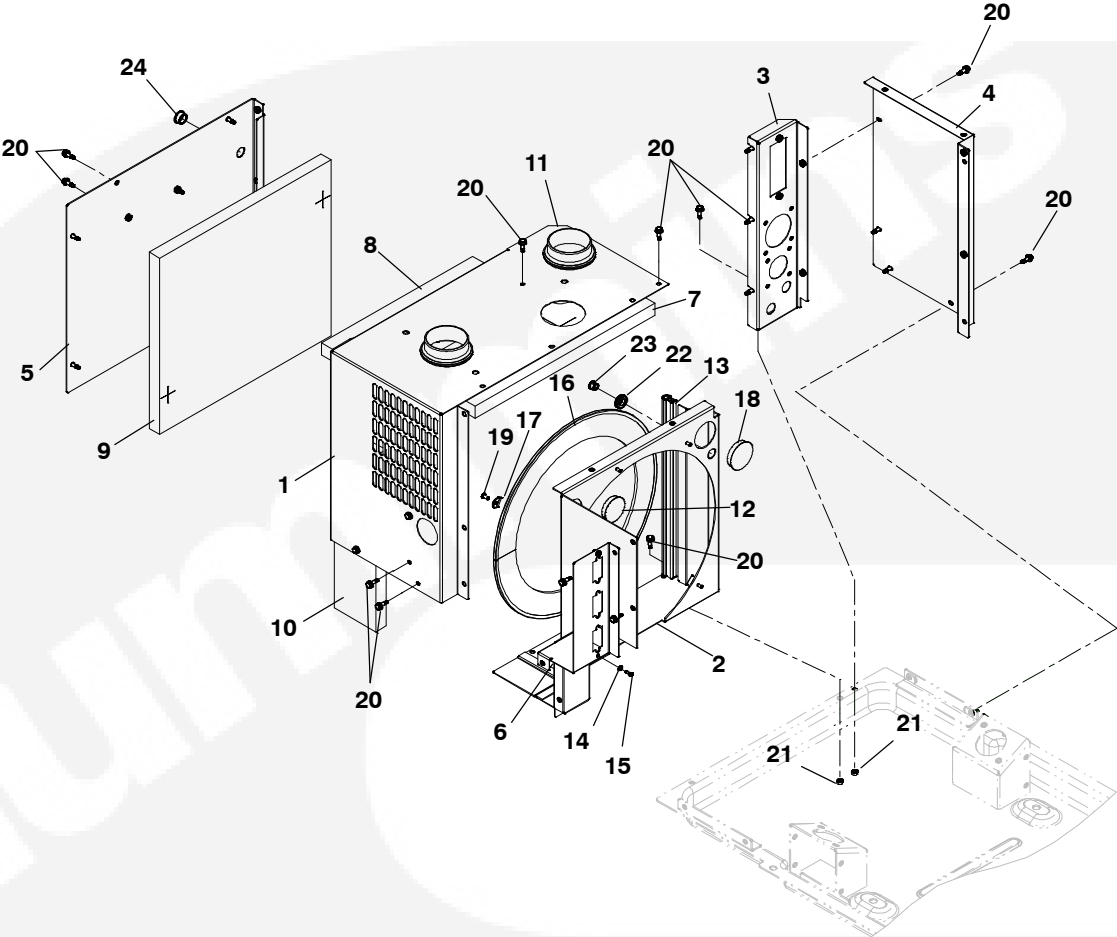


Item	Part No.	Description	Qty
1	403-4581-02	Base, Generator Mounting	1
2	403-3573	Isolator, Vibration	4
3	526-0172	Washer, Flat	4
4	750-1010	Nut, Hex Machine (M12 x 1.75mm)	4
5	526-2140	Washer, Flat (M12)	19
6	821-6003-02	Screw, Hex Head Cap (M8 x. 25 x 20mm)	8
7	800-2118	Screw, Hex Head Cap M12 x 1.75 x 60mm)	4
8	403-6788-02	Mount, Engine	2
9	800-3031	Screw, Hex Head Cap (M12 x 1.25 x 20mm)	7

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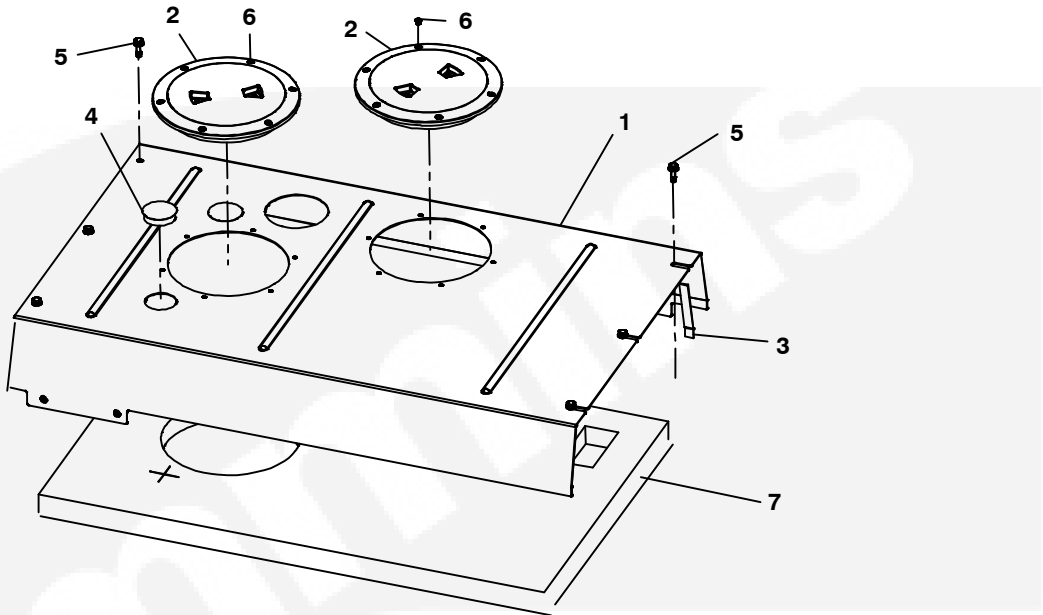
Generator Enclosure



Generator Enclosure

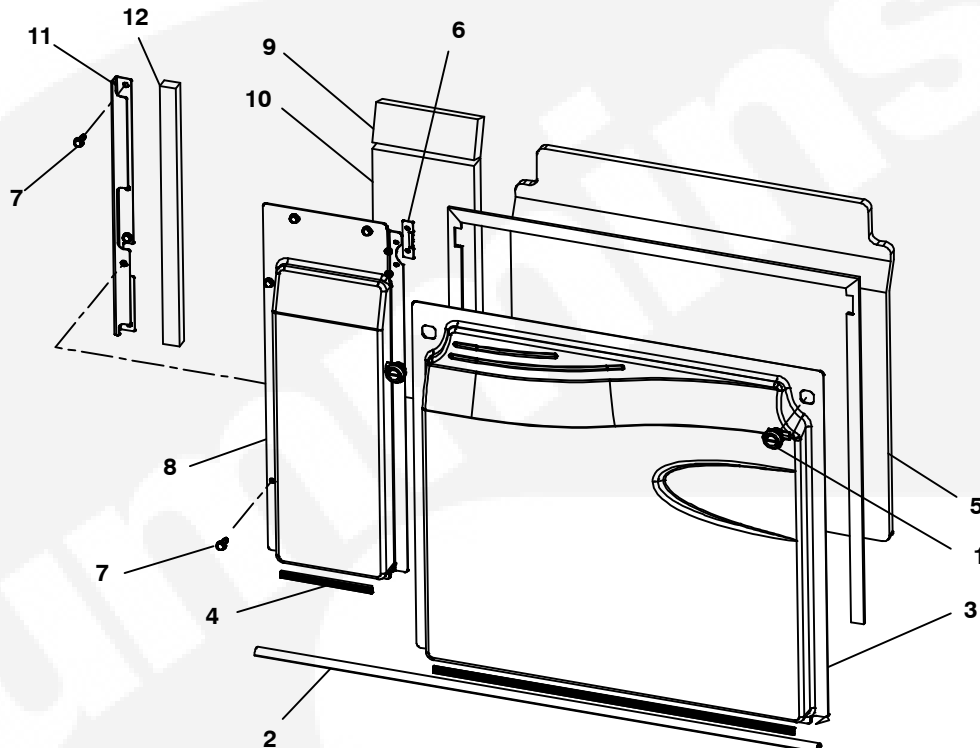
Item	Part No.	Description	Qty
1	404-0023-03	Panel, Enclosure	1
2	404-0020-03	Panel, Air Baffle	1
3	404-0019-03	Panel, Enclosure	1
4	404-0024-03	Panel, Enclosure	1
5	404-0021-03	Cover, Enclosure	1
6	404-0022-03	Panel, Enclosure (See PCB Mounting)	1
7	405-9129	Insulation, Panel	1
8	405-9079	Insulation, Enclosure	1
9	404-0045	Insulation, Cover	1
10	405-7430	Insulation, Panel	1
11	508-1152	Grommet, Rubber	2
12	517-0138-07	Plug, Hole	1
13	895-0402	Seal, Weather	1.23'
14	526-2050	Washer, Flat	2
15	800-3042	Screw, Hex Head	2
16	509-0368	Seal, Brush	1
17	134-5299-02	Bracket	5
18	517-0138-08	Plug, Hole	1
19	818-0231-02	Rivet, Pop	5
20	A030B088	Screw, Hex Head	25
21	860-2057	Nut	2
22	508-0021	Grommet, Rubber	1
23	517-0133	Plug, Hole	1
24	517-0136	Plug, Hole	1

Engine Sound Shield



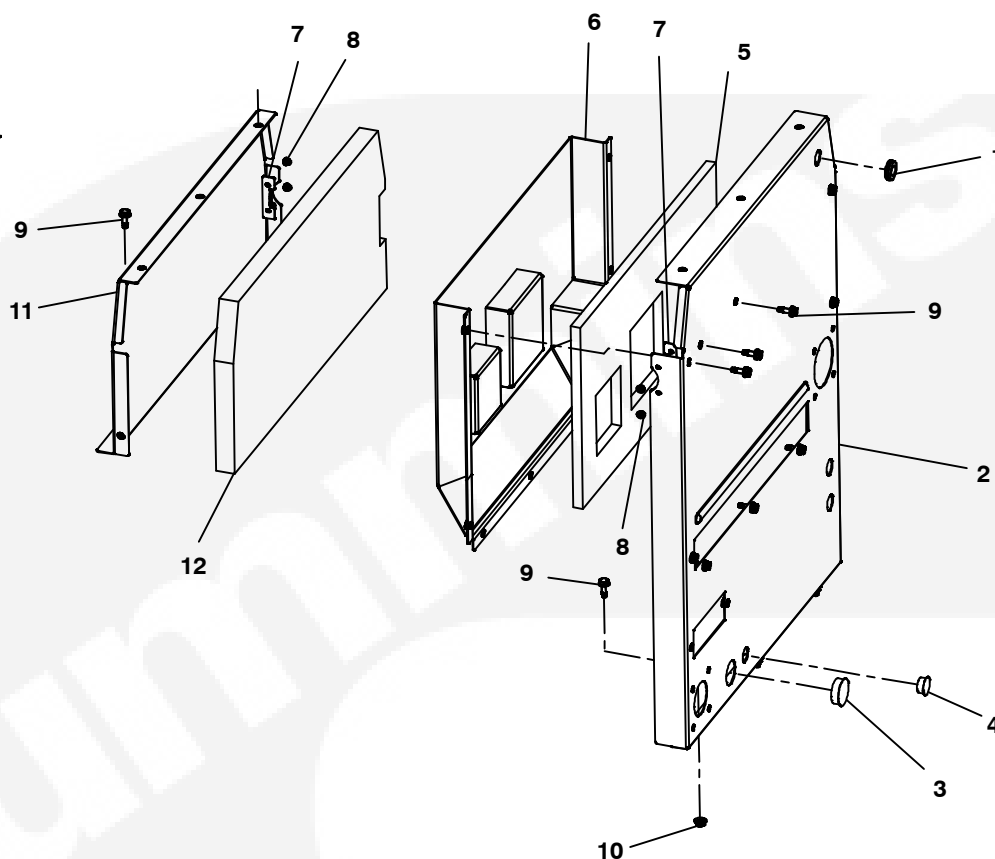
Item	Part No.	Description	Qty
1	A035K157	Panel, Roof	1
2	405-6340	Cover, Access	2
3	405-5052	Gasket	4
4	517-0392-19	Plug, Hole	1
5	A030B088	Screw, Hex Head	6
6	A030F177	Rivet, Flat Head	12
7	A035K169	Insulation, Roof	1

Engine Sound Shield



Item	Part No.	Description	Qty
1	A030B824	Latch	4
2	895-0411	Strip, Weather	5.1
3	405-9751-03	Door, Access	2
4	895-0395	Seal, Weather	12.5'
5	405-9568	Insulation, Door	2
6	406-1032	Catch, Door	1
7	A030B088	Screw, Hex Head	14
8	404-0097-03	Panel, Access	2
9	405-6993-01	Insulation, Sound	2
10	405-6995-01	Insulation, Sound	2
11	405-0098-03	Spacer, Panel	2
12	405-7347	Insulation, Sound	2

Engine Sound Shield

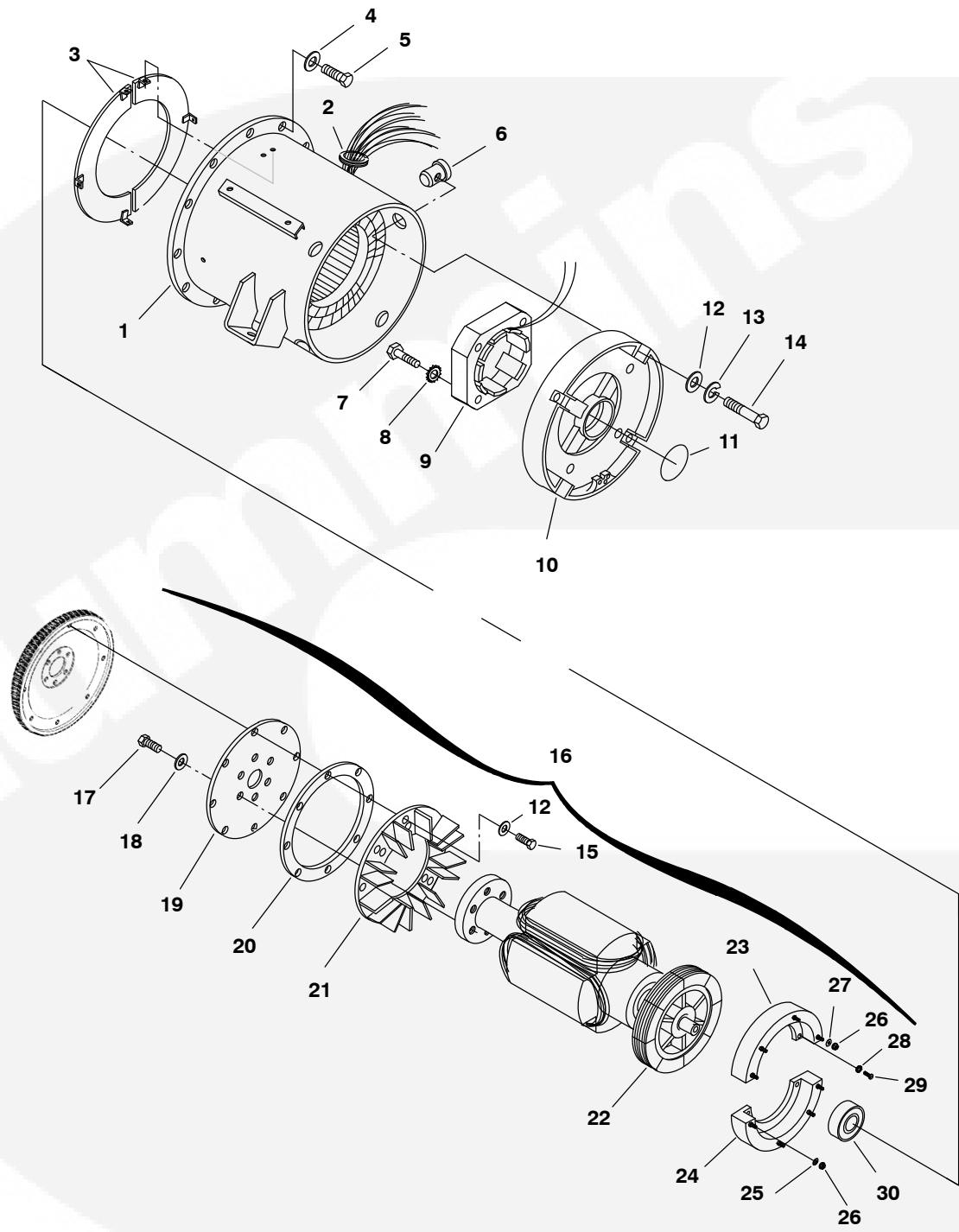


Item	Part No.	Description	Qty
1	508-0021	Grommet, Rubber	1
2	404-0039-03	Panel, Enclosure	1
3	517-0138-04	Plug, Hole	1
4	517-0136	Plug, Hole	1
5	404-0576	Insulation, Duct	1
6	404-0573-03	Panel, Duct	1
7	406-1032	Catch, Door	2
8	A030F179	Rivet, Flat Head	4
9	A030B088	Screw, Hex Head	10
10	870-2065-02	Nut, Hex Flange	3
11	404-0096-03	Panel, Roof	1
12	405-7179	Insulation, Roof	1

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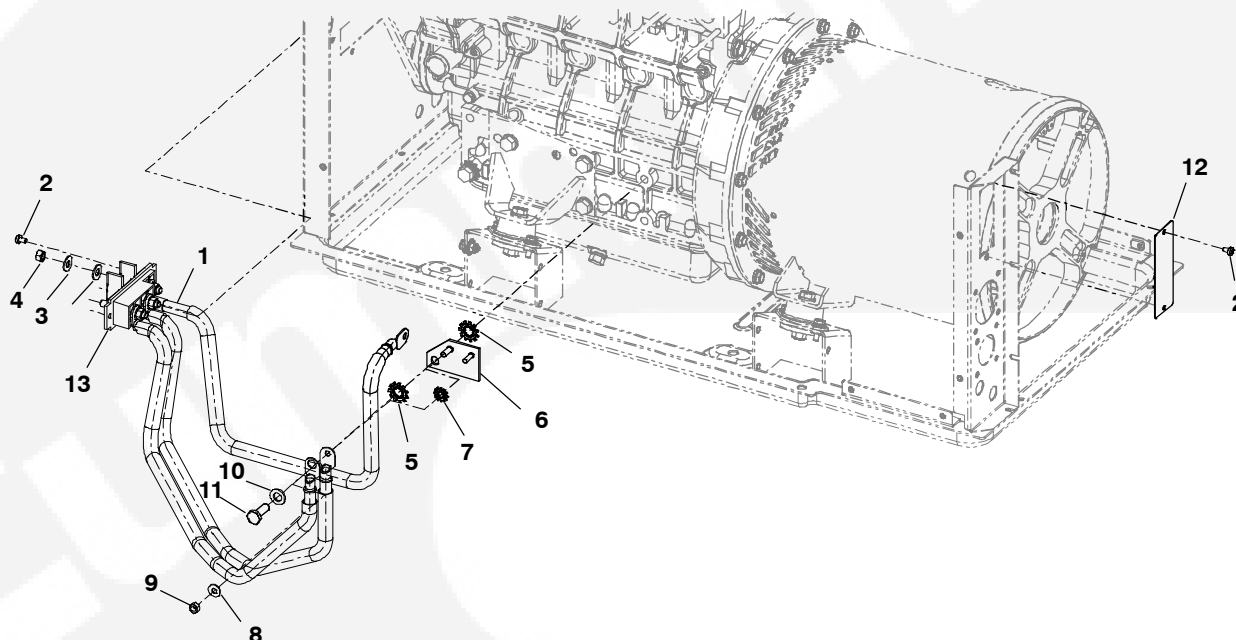
Generator



Generator

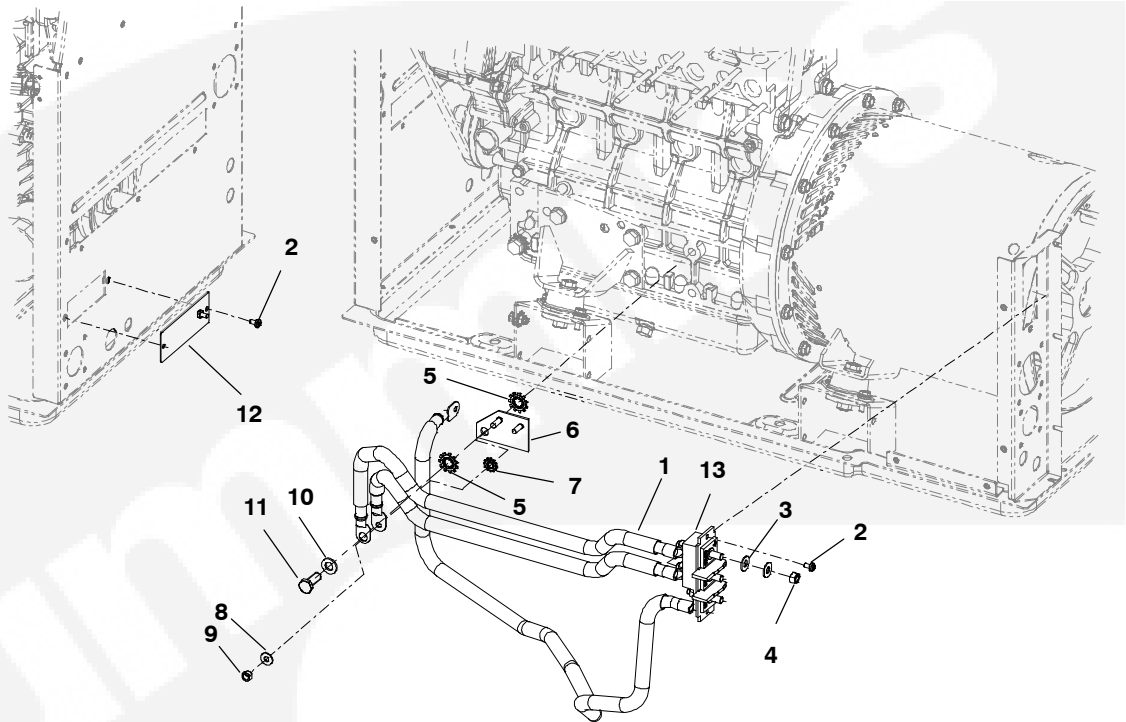
Item	Part No.	Description	Qty
1		Stator, Generator	
	220-4618-02	HDKBP (Single Phase)	1
	220-4618-04	HDKBR, HDKBV (Single Phase)	1
	220-4619-02	HDKBP (Three Phase)	1
	220-4619-04	HDKBR, HDKBV (Three Phase)	1
2	508-1203	Grommet	1
3	234-0935-02	Baffle, Air (3 Phase)	2
4	526-0174	Washer, Flat (3/8)	12
5	800-0051	Screw, Hex Head Cap (3/8-16 x 1-1/4)	12
6	232-3706-02	Retainer, Endbell	4
7	815-0935	Screw, Hex Head Thread Forming (1/4-20 x 2")	4
8	853-0013	Washer, ET Lock (1/4")	4
9	220-4413-02	Stator, Wound	1
10	211-0435-01	Endbell	1
11	509-0094	Seal, O'Ring	1
12	526-0399-42	Washer, Flat (3/8)	4
13	850-0114-06	Washer, Lock (5/16")	4
14	800-0310-27	Screw, Hex Head Cap (5/16"-18 x 2-1/2")	4
15	800-0310-36	Screw, Hex Head Cap (3/8-16 x 1)	8
16		Rotor Assy, Generator (Includes Parts Marked *)	
	201-3517-02	HDKBP	1
	201-3517-04	HDKBR, HDKBV	1
17	800-3010-44	*Bolt, Hex Head Cap (.50-13 UMC x 1.0")	6
18	526-0399-44	*Washer, Flat	6
19	232-3672-03	*Disc, Drive	1
20	232-3826-02	*Spacer, Fan	1
21	205-0229-02	*Fan, Generator	1
22	201-3515-02	*Rotor, Wound (Excitor)	1
23	358-0069	*Rectifier (Positive)	1
24	358-0070	*Rectifier (Negative)	1
25	526-0008	*Washer, Flat (#10)	10
26	870-0131	*Nut, ET Hex (.190-32)	2
27	526-0399-11	*Washer, Flat (#10)	2
28	853-0008	*Washer, ET Lock (.190")	4
29	813-0100	*Screw, Pan Head Machine (.190-32 x .50")	4
30	510-0112	*Bearing, Bal	1

Front Bulkhead Battery Connection



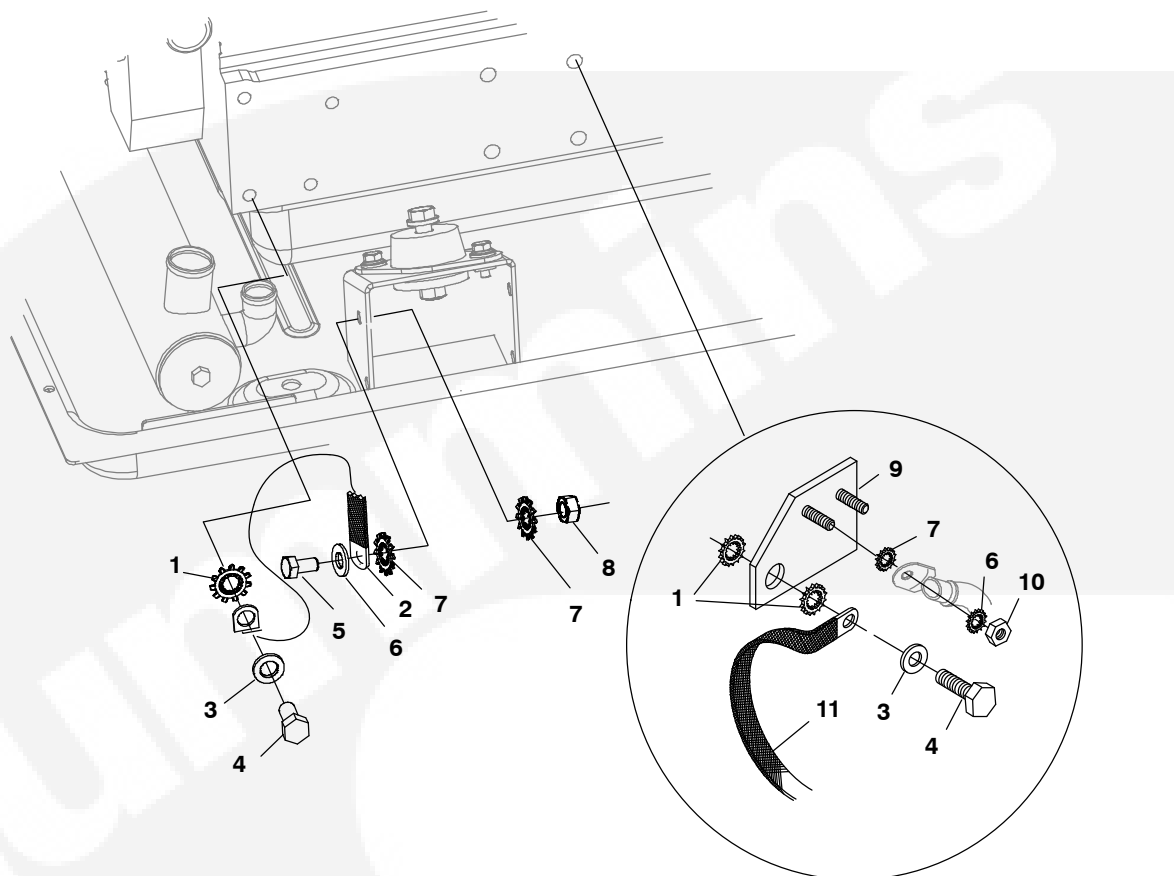
Item	Part No.	Description	Qty
1	338-4623-02	Harness, Battery	1
2	823-1002-03	Screw, Pan Head Torx (M6 x 1 x 10mm)	4
3	526-0029	Washer, Flat (1/2")	6
4	862-0003	Nut, Hex (3/8-16UNC)	3
5	856-0013	Washer, ETIT Locking (1/2")	2
6	337-2784-02	Assy Bus, Bar	1
7	856-0008	Washer, ETIT Locking (Neg GND 5/16")	1
8	526-0054	Washer, Flat Neg GND(8.33ID x 19.05OD)	1
9	871-0025	Nut, HB Full (5/16-18)	1
10	526-2140	Washer, Flat (M12)	1
11	800-3032	Screw, Hex Head Cap (M12 x 1.25 x 30mm)	1
12	405-9764-02	Cover, Access	1
13	332-3865-03	Block, Terminal	1

Rear Bulkhead Battery Connection



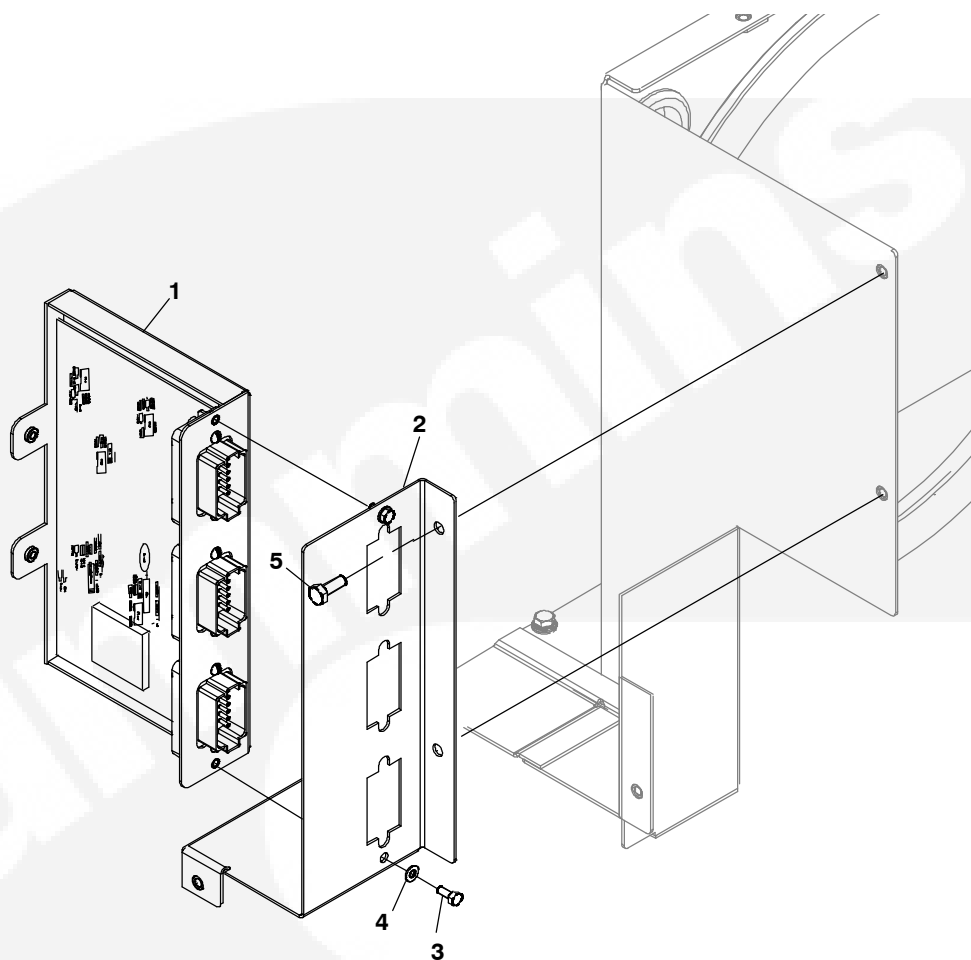
Item	Part No.	Description	Qty
1	338-4623-02	Harness, Battery	1
2	823-1002-03	Screw, Pan Head Torx (M6 x 1 x 10mm)	4
3	526-0029	Washer, Flat (1/2")	6
4	862-0003	Nut, Hex Head Heavy (3/8-16 UNC)	3
5	856-0013	Washer, Lock EIT (1/2")	2
6	337-2784-02	Assy Bus, Bar	1
7	856-0008	Washer, Lock (Neg GND 5/16")	1
8	526-0054	Washer, Flat Neg GND(8.33ID x 19.05OD)	1
9	871-0025	Nut, HB Full (5/16-18)	1
10	800-3032	Washer, Flat (M12)	1
11	800-3032	Screw, Hex Head Cap (M12 x 1.25 x 30mm)	1
12	405-9764-02	Cover, Access	1
13	332-3865-03	Block, Terminal	1

Grounding System



Item	Part No.	Description	Qty
1	856-0013	Washer, EIT Lock (1/2")	3
2	337-2785	Strap, Bond	1
3	526-2140	Washer, Flat (M12)	2
4	800-3032	Screw, Hex Head Cap (M12 x 1.25 x 30mm)	1
5	800-2057	Screw, Hex Head Cap (M8 x 1.25 x 20mm)	1
6	526-2100	Washer, Flat (M8)	2
7	856-0008	Washer, EIT Locking (5/16")	2
8	750-1006	Nut, Hex (M8 x 1.25mm)	1
9	337-2784-02	Bar, Bus	1
10	871-0025	Nut, Hex Brass (5/16-18")	1
11	337-0090-02	Strap, Electrical	1

PCB Mounting



Item	Part No.	Description	Qty
1	327-1691	PCB, Control Card	1
2	404-0022-03	Panel, PCB Mounting	1
3	800-3042	Screw, Hex Head (M4 x 10mm)	2
4	526-2050	Washer, Flat (M4)	2
5	A030B088	Screw, Hex Head Sems Stainless Steel (M6 x 1 x 16mm)	3

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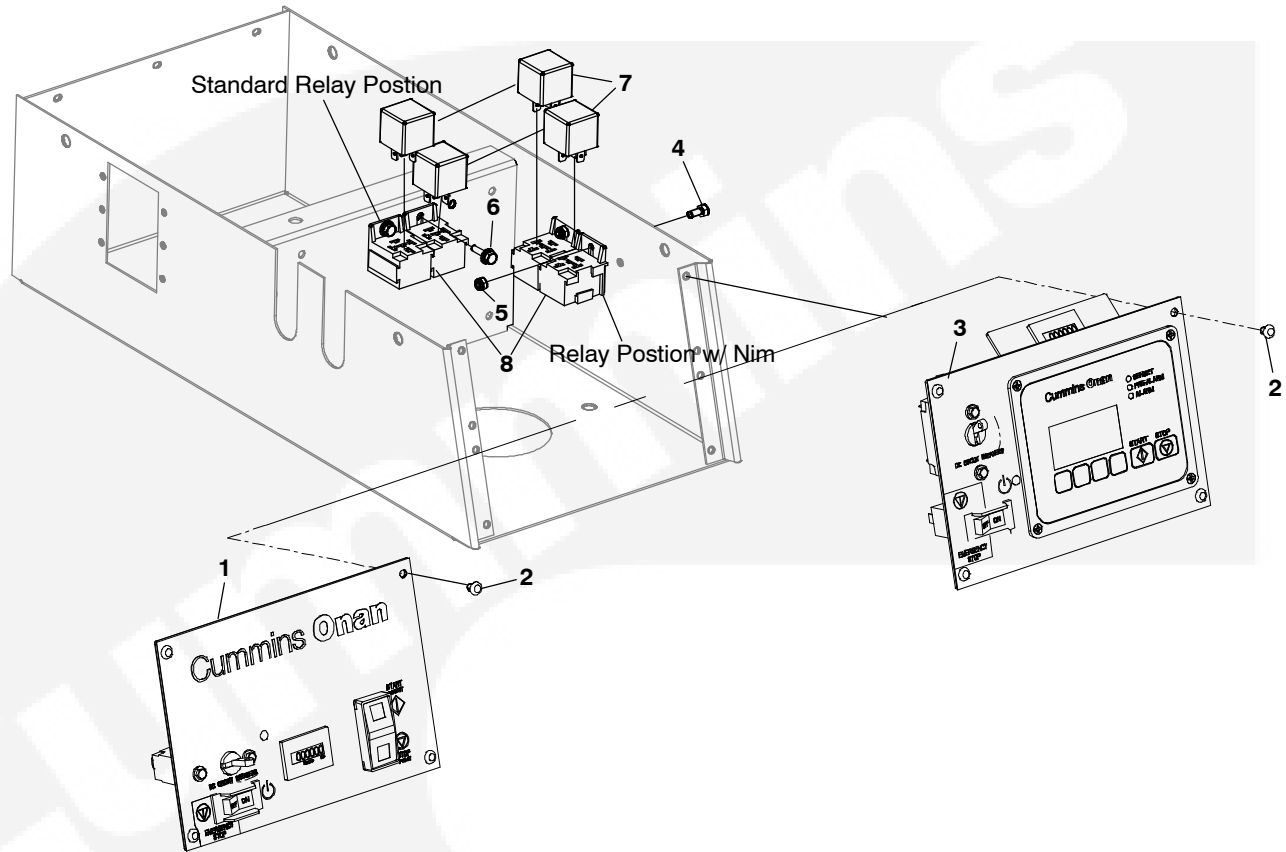
Control Box

Item	Part No.	Description	Qty
1	319-6227-03	Control, Box	1
2	402-0681-01	Isolator, Vibration	3
3	818-0231-01	Rivet, Pop	6
4	319-6228-03	Cover, Box Control	1
5	319-4404	Cover	1
6	332-3750	Guide, Card	1
7	508-1105	Grommet, Remote	2
8	517-0136	Plug, Hole	2
9	A030B088	Screw, Hex Head Sems (M6 1.0 x 16mm)	6
10	526-2100	Washer, Flat (M8)	3
11		Standoff, Insulator	
	332-2370	1 Phase	2
	332-2370	3 Phase	3
12		Washer, Flat (6.75ID x 14.30D x .8mm)	
	526-0052	1 Phase	6
	526-0052	3 Phase	7
13		Screw, Locking Head (1/4-20UNC x 14.30D x .8)	
	821-0009	1 Phase	4
	821-0009	3 Phase	6
14	856-0006	Washer, ETIT Locking (1/4")	4
15	871-0016	Nut, Hex (1/4-20")	5
16	810-0155	Screw, Round Head	2
17	337-2795	Strap, Bond	1
18	853-0016	Washer, ET Locking (5/16")	2
19	821-6003-01	Screw, Hex Head Sems (M8 x 1.25 x 16mm)	1
20	800-6062	Screw, Hex Head Cap (M8 x 1.25 x 45mm)	3
21	815-0550-03	Screw, XREC Phillips (#6-23 x .312")	4
22	327-1659-01	PCB	1
23	800-6002	Screw, Hex Head (M5 x 0.8 x 10mm)	4
24	870-2062	Nut, Nylon Locking (M5)	4
25	338-4491	Harness, Accessory (J1939)	1
26	517-0138-05	Plug, Hole	1
27	517-0138-08	Plug, Hole	1
28		Breaker, Circuit	
		HDKBP	
	A040F817	60 Amp	1
	A040F853	45 Amp	1
	A040F887	25 Amp	1
		HDKBR	
	A040F821	75 Amp	1
	A040F823	80 Amp	1
	A040F857	55 Amp	1

Control Box (Continued)

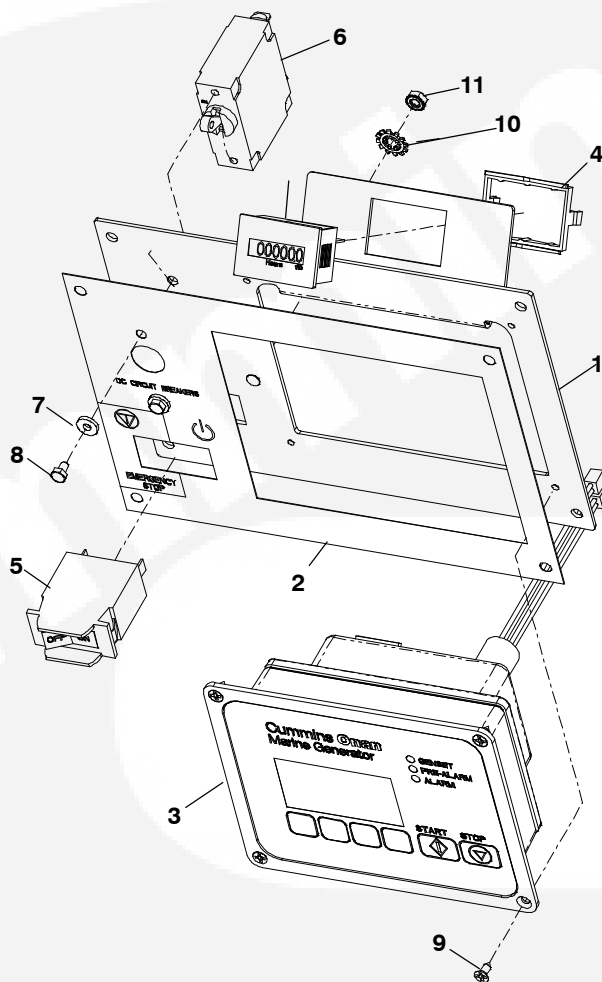
Item	Part No.	Description	Qty
	A040F859	60 Am	1
	A040F889	30 Amp	1
	A040F891	35 Amp	1
		HDKBV	
	A040F825	85 Amp	1
	A040F827	90 Amp	1
	A040F859	60 Amp	1
	A040F861	65 Amp	1
	A040F891	35 Amp	1
	A040F895	40 Amp	1

Control Panel



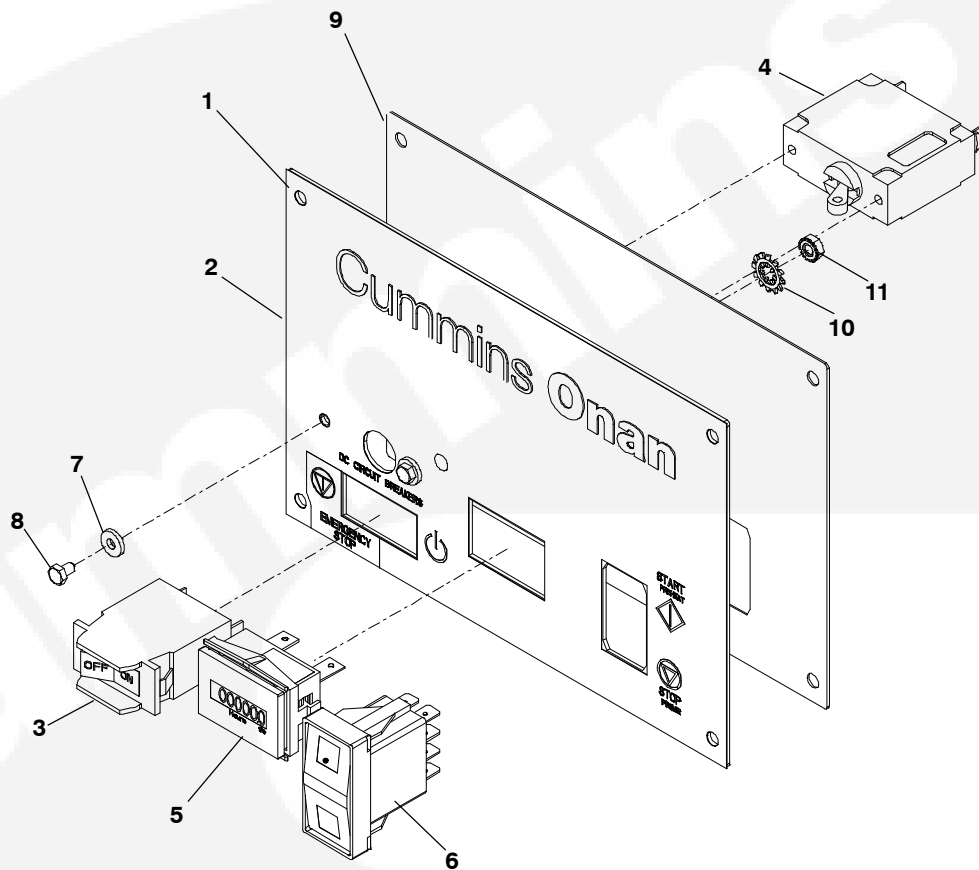
Item	Part No.	Description	Qty
1		Assy, Engine Panel (See Control Panel for Parts)	
	300-6362-01	12V	1
	300-6362-02	24V	1
2	818-1150-03	Rivet, Drive Plastic (Std)	4
3	300-6363-02	Assy, Control	1
4	800-6002	Screw, Hex Head Cap (M5 x .8 x 10mm)	2
5	870-2062	Nut, Nylon Lock (M5)	2
6	821-6001-03	Screw, Hex Head Sems (M5 x .8 x 16mm)	2
7		Relays	
	307-2767	12V	2
	307-2819	24V	2
8	323-1563	Contact, Relay	2

Control Panel (eSDD Display)



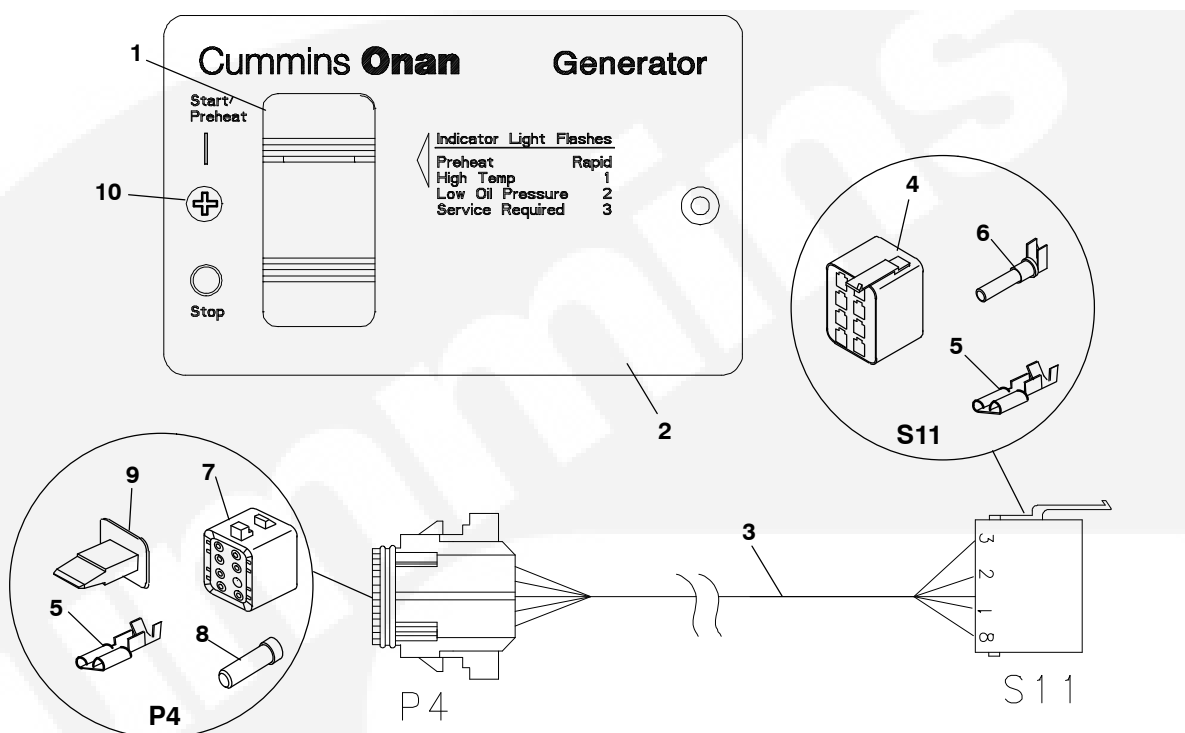
Item	Part No.	Description	Qty
	300-5944-03	Kit, Control (Kit Includes Parts Marked *)	1
1	319-5544-02	*Panel, Display	1
2	98-8323	*Label, Information	1
3	300-6393	*Controls	1
4	302-2048	Hourmeter	1
5	320-2361	Breaker, Circuit	1
6	320-2362	Breaker, Circuit	1
7	526-0399-05	*Washer, Flat (#6)	2
8	800-0309-10	*Screw, Hex Head Mach (#6-32UNC-2A x .250")	2
9	814-2155-01	*Screw, Flange Head XREC (M3.5 x 9.5mm)	4
10	856-0003	*Washer, ETIT Lock (#10")	1
11	870-0131	*Nut, Sems ET (#10-32")	1

Control Panel (eSDD Display)



Item	Part No.	Description	Qty
		Assy, Engine Panel (All Parts Included)	
	300-6362-01	12V	1
	300-6362-02	24V	1
1	319-6871-02	Panel, Control	1
2	98-8713	Label, Information (Control)	1
3	320-2361	Breaker Circuit	1
4	320-2362	Breaker Circuit	1
5	302-2048	Meter, Hour	1
6		Switch, Rocker	
	308-1218	12VDC	1
	308-1219	24VDC	1
7	526-0399-05	Washer, Flat DAC	2
8	800-0309-10	Screw, Hex Head Mach (6-32 x 1/4")	2
9	319-6873	Panel, Control Box (Ground)	1
10	856-0003	Washer, EIT Lock (#10)	1
11	870-0131	Nut, Sems EIT (#10-32)	1

Remote Control Panel

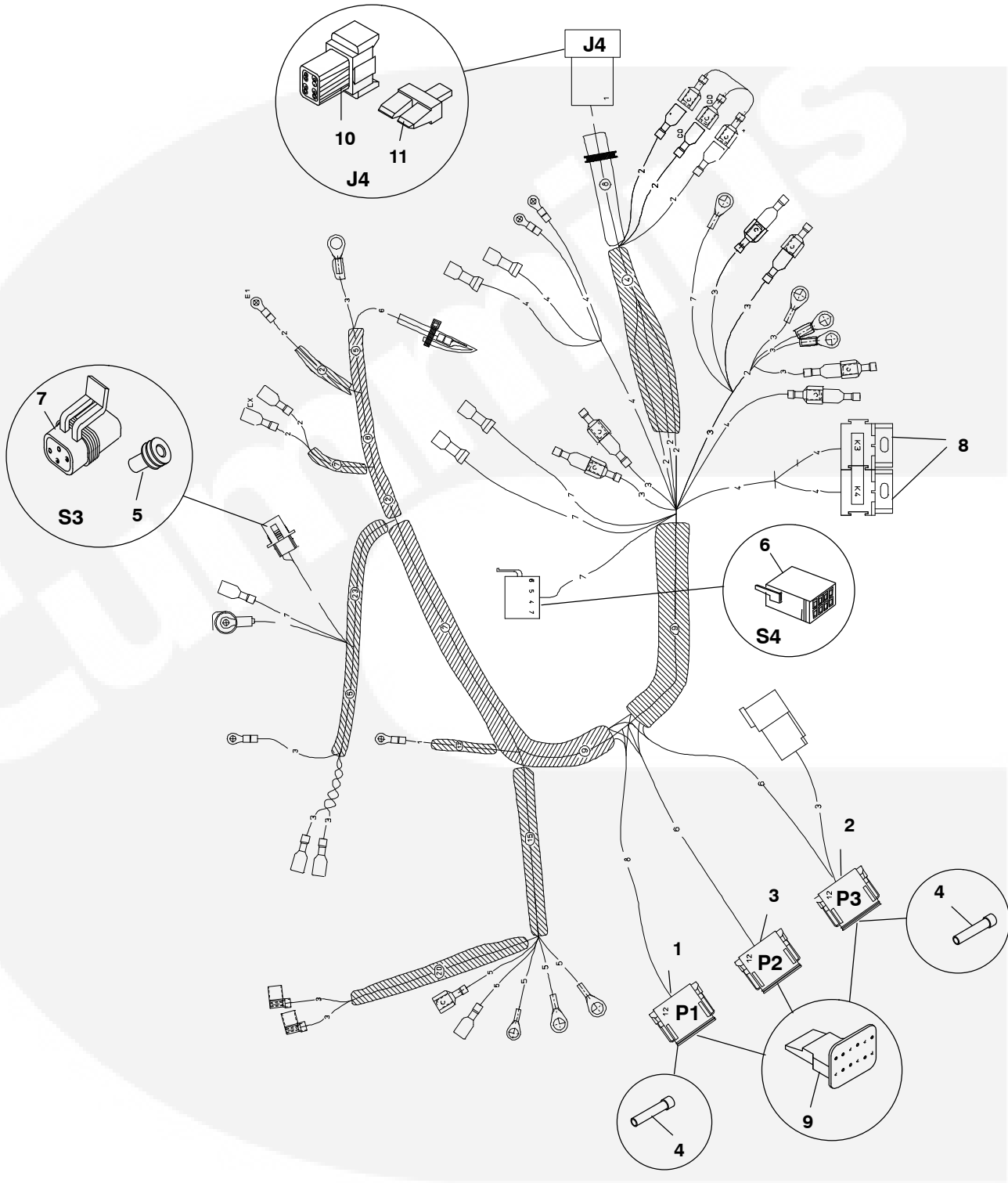


Item	Part No.	Description	Qty
		Kit, Remote Switch Harness (Includes Parts Marked +)	
	541-0941-01	12V	
	541-0941-02	24V	
		Kit, Panel Remote (Includes Parts Marked #)	
	300-5725-01	12V	
	300-5725-02	24V	
1		#+Switch, Rocker (S11)	
	308-1101	12V	1
	308-1102	24V	1
2	319-6990	#Panel, Remote (Includes Printing)	1
3	338-3988	#+Harness, Remote Panel (Includes Parts Marked *)	1
4	308-1019	*Connector, Switch (S11)	1
5	332-2890	*Terminal, Receptacle (.25")	6
6	323-1492	*Terminal, Socket	6
7	323-1541	*Plug, (8 Pin)	1
8	323-1491	*Plug, Seal	3
9	323-1543	*Wedge, Plug (8 Pin)	1
10	815-0910	#Screw, Wood (#6 x 1)	2
11	98-8092	+Label, Instructions	1
12	98-8081	#+Label, Warning	1

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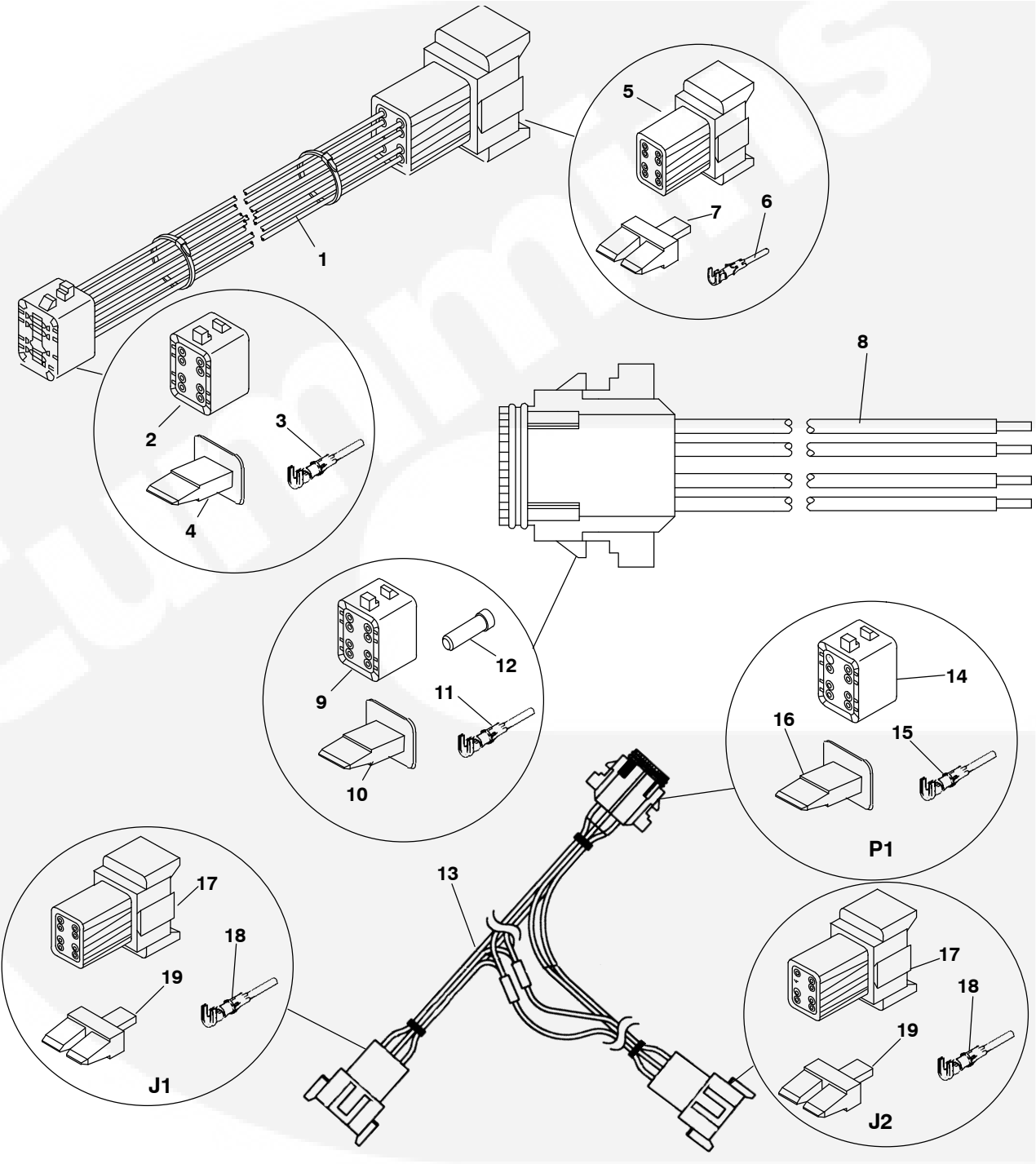
Control Harness



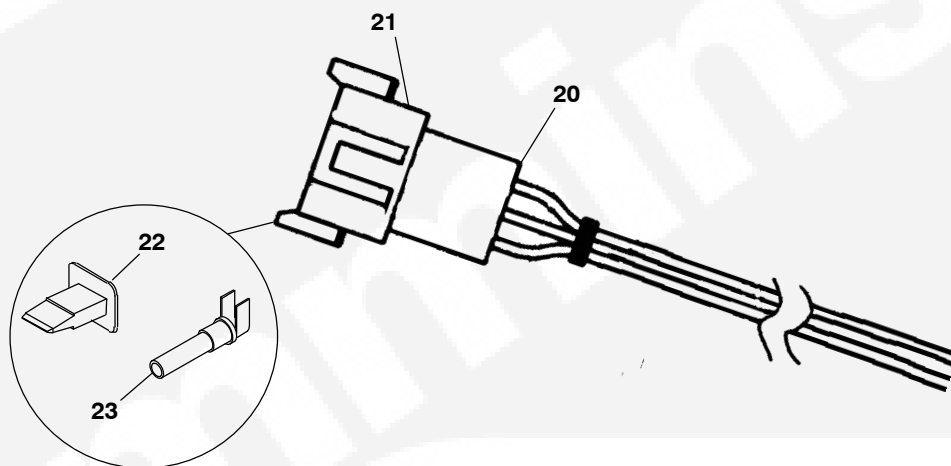
Control Harness

Item	Part No.	Description	Qty
	338-5174	Harness, Control	1
1	323-1582-06	Plug(12 Pin, Black P1)	1
2	323-1582-05	Plug (12 Pin, Gray P3)	1
3	323-1582-07	Plug (12 Pin, Green P2)	1
4	323-1591	Plug (P1)	AR
5	323-1708	Seal,Cable(S3)	AR
6	308-1019	Switch, Connector (S4)	1
7	323-1765	Connector, Housing 4 Pin (S3)	1
8	323-1563	Socket, Relay	1
9	323-1583	Plug, Wedge 12 Pin, P1, P2, P3	3
10	323-1542	Connector, Receptacle 8 Pin (J4, J8)	2
11	323-1544	Receptacle, Wedge (J4, J8)	2
12	098-7917	Label, Information (Not Shown)	1

Wiring Harnesses



Wiring Harness



Wiring Harness

Item	Part No.	Description	Qty
1		Harness, Remote Extension (Includes Parts Marked #)	
	338-3167	15 feet	1
	338-3168	25 feet	1
	338-3169	45 feet	1
	338-3169-01	75 feet	1
	338-3169-02	100 feet	1
1	338-3169-03	150 feet	1
2	323-1541	# Plug (8 Pin)	1
3	323-1492	# Terminal, Socket	8
4	323-1543	# Wedge, Plug (8 Pin)	1
5	323-1542	# Receptacle, (8 Pin)	1
6	323-1491	# Terminal, Pin	8
7	323-1544	# Wedge, Receptacle (8 Pin)	1
8	338-4223	Harness, Remote Panel	1
9	323-1541	Plug (8 Pin)	1
10	323-1543	Wedge, Plug (8Pin)	1
11	323-1492	Terminal, Socket	AR
12	323-1591	Plug, Seal	AR
13	338-4016	Harness, Junction (Includes Parts Marked +)	1
14	323-1541	±° Plug, Connector (8 Pin)	1
15	323-1492	±° Terminal, Socket	AR
16	323-1543	±° Wedge, Plug (8 Pin)	1
17	323-1542	+ Connector, Receptacle (8 Pin)	2
18	323-1491	@ Terminal, Pin	AR
19	323-1544	+ Wedge, Lock, Receptacle (8 Pin)	2
20	338-4017	Harness, Pigtail (Includes Parts Marked @)	1
21	323-1542	@ Connector, Receptacle (8 Pin)	1
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23	323-1491	@ Terminal, Pin	AR

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