



Parts Manual

Hybrid Quiet Diesel Power System

Power System HQDSB (Spec A–B)

Power Unit HQDPB (Spec A–B)

Primary Inverter Charger HQDVA (Spec A–C)

Secondary Inverter Charger HQDVB (Spec A–B)

Transfer Switch HQDTA (Spec A–C)

Introduction

This parts catalog applies to the Hybrid Power System set listed below. Parts are arranged in groups of related items and each illustrated part is defined by a reference number corresponding to the same reference number in the parts list. Parts illustrations are typical. Using the model and specification number from your generator set nameplate, select parts that apply to your set. Right and left sides are determined by facing the generator end (front) of the set.

System Data Table

Model Identification	Unit Ident.	Watts
1218HQDSB-6037A	Sys. Hybrid QD	18kW
12HQDPB-6038B	Pwr Unit	12kW
18HQDVA-6039A	Primary Inverter	3kW
18HQDVB-6040A	Secondary	3kW
HQDTA75-6041B	Transfer SW	
1215HQDSB-6042A	Sys. Hybrid QD	15kW
12HQDPB-6923B	Pwr Unit	12kW
15HQDVA-6043A	Primary Inverter	1.5kW
15HQDVB-6044A	Secondary	1.5kW
HQDTA75-6041B	Transfer SW	

* – The specification number denotes customer requested options or deviations from a standard (1A, 1B, etc.) model. The specification letter advances (A, to B, to C, etc.) with major manufacturing changes.

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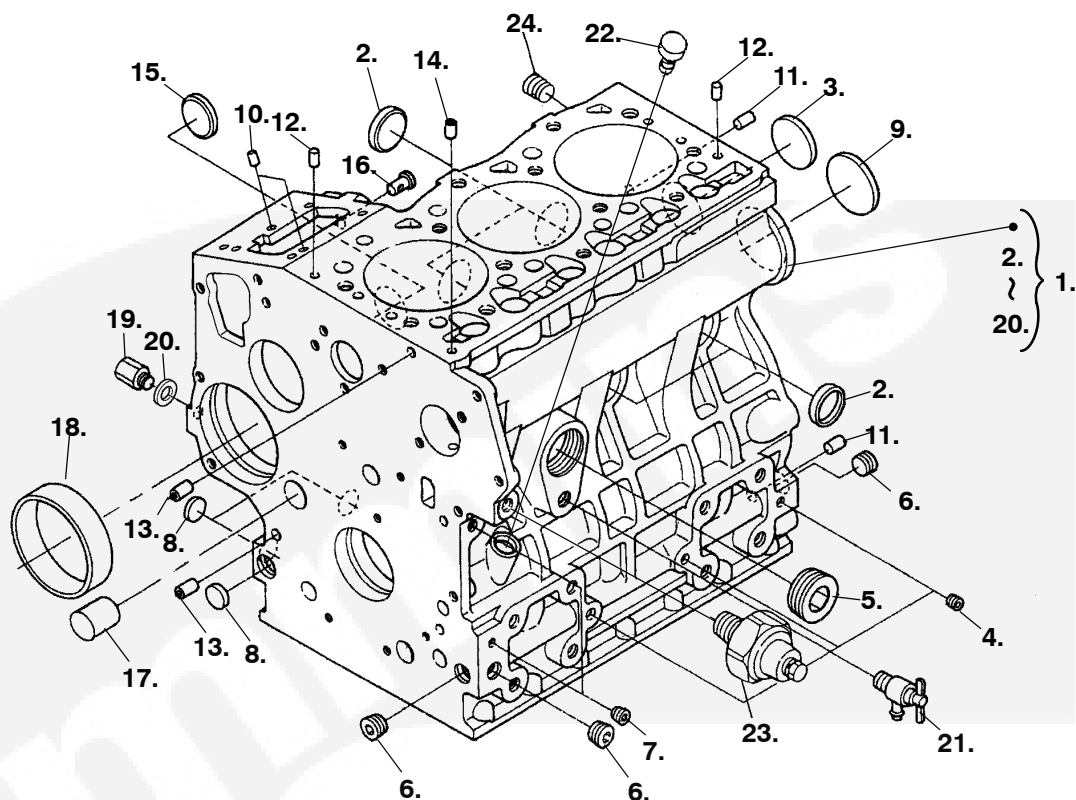
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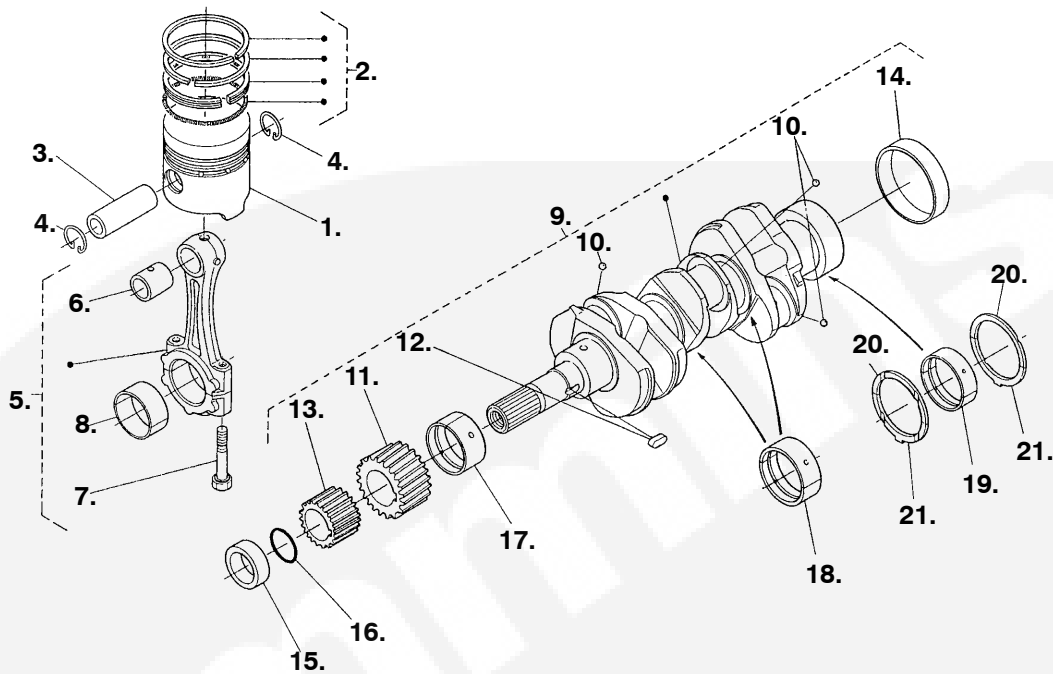
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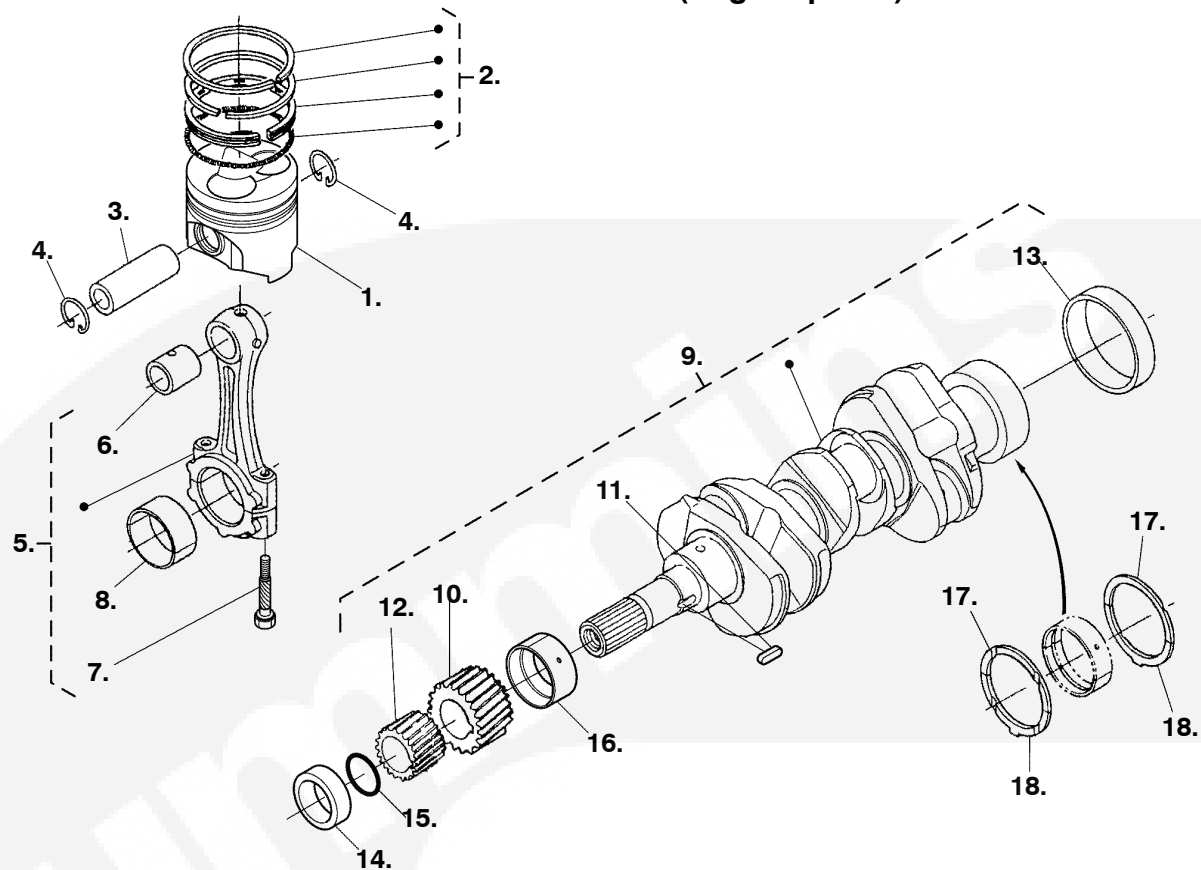
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Comp, Engine (Includes Parts Marked *)	11.	185-5487	2	*Pin, Straight
	100-3831	1	Spec A	12.	185-7420	2	*Pin, Straight Spec A
	100-4191	1	Begin Spec B		516-2137	2	Begin Spec B
1.			Comp, Crankcase (Includes Parts Marked *)	13.	185-2115	1	*Pin, Pipe
	110-4024	1	Spec A	14.	185-6469	1	*Pin, Pipe
	110-4330	1	Begin Spec B	15.	185-7212	1	*Plug, Fuel Camshaft
2.	185-5484	4	Cap, Seal	16.	185-6857	1	*Pin, Start Spring
3.	185-2412	1	Cap, Sealing	17.	185-6471	1	*Plug
4.	185-2188	1	*Plug	18.	185-6472	1	*Bushing, Governor Gear
5.	185-6856	1	*Plug	19.	185-5845	1	*Plug
6.	185-6468	3	*Plug	20.	185-2338	1	*Gasket
7.	185-2233	2	*Plug	21.	185-5490	1	Cock, Drain
8.	185-6121	3	*Plug	22.	181-9231	2	Plug, Oil Gauge
9.	185-6040	1	*Plug	23.	185-5492	1	Switch, Oil
10.	185-5486	2	*Pin, Straight	24.	185-5502	1	Plug

Piston Crankshaft (Spec A)



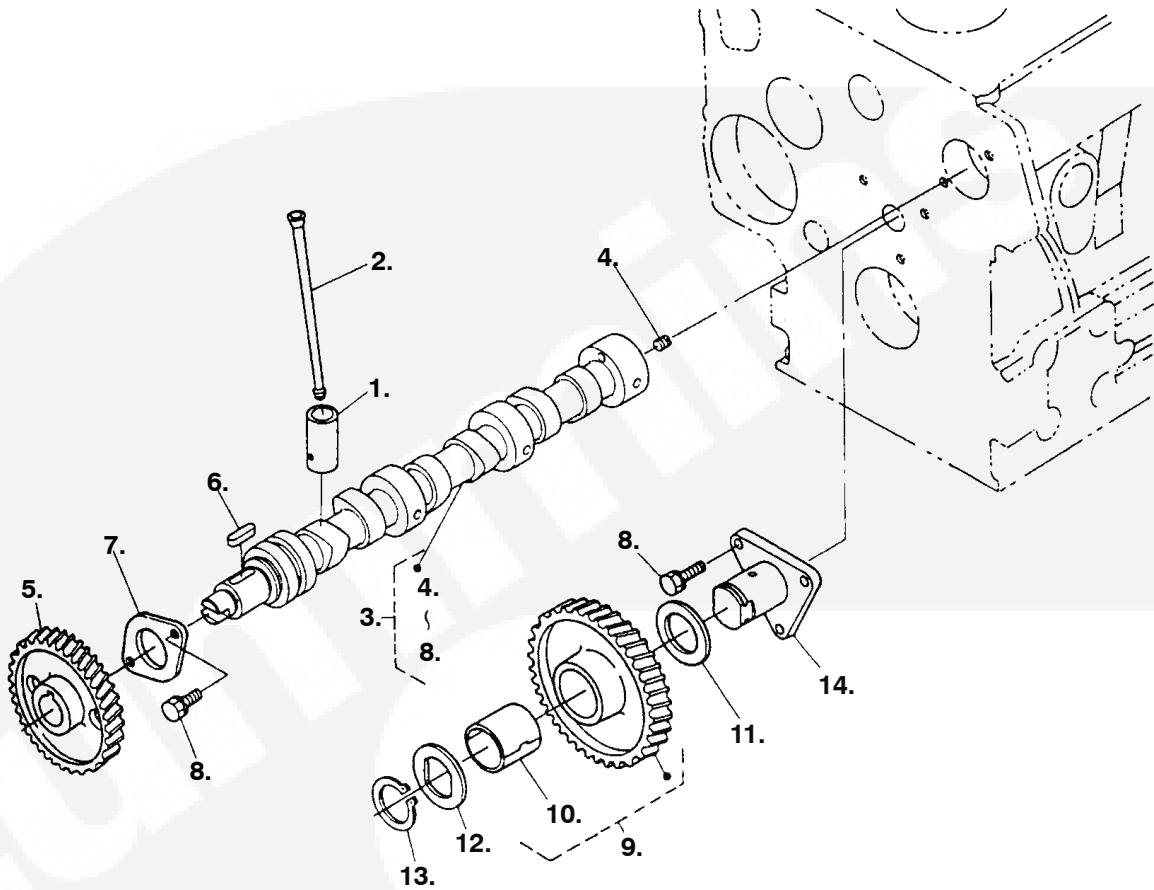
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.			Piston	15.	185-6544	1	Collar, Crankshaft
	112-0319	3	Standard	16.	185-7429	1	Ring
	112-0320	3	0.50mm	17.			Metal, Crankshaft
2.			Ring Set, Piston		185-6546	1	Standard
	185-7310	3	Standard		185-6547	1	.2mm Undersize
	185-7311	3	0.50mm		185-6548	1	.4mm Undersize
3.	185-6531	3	Pin, Piston	18.			Metal, Crankshaft
4.	185-6532	6	Circlip, Piston Pin		185-6549	2	Standard
5.	114-0430	3	Rod Assy, Connecting (Includes Bolt, Bearing and Bushing)		185-6550	2	.2mm Undersize
6.	181-9101	3	Bush, Piston Pin		185-6552	2	.4mm Undersize
7.	181-9102	6	Bolt, Connecting Rod	19.			Metal, Crankshaft
8.			Metal, Crankpin		185-7430	1	Standard
	185-6536	3	Standard		185-6553	1	.2mm Undersize
	185-6537	3	.2mm Undersize		185-6554	1	.4mm Undersize
	185-6538	3	.4mm Undersize	20.			Metal, Crankshaft
9.	185-7376	3	Comp., Crankshaft		185-5938	2	Standard
10.	185-5924	3	Ball		185-6555	2	.2mm Undersize
11.	185-6540	1	Gear, Crank		185-6556	2	.4mm Undersize
12.	185-6541	1	Key	21.			Metal, Crankshaft
13.	185-6542	1	Gear, Oil Pump Drive		185-5941	2	Standard
14.	185-6543	1	Sleeve, Crankshaft		185-5942	2	.2mm Undersize
					185-5943	2	.4mm Undersize

Piston Crankshaft (Begin Spec B)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	112-0327	3	Piston	11.	185-6541	1	Key
	112-0328	3	Standard	12.	185-6542	1	Gear, Oil Pump Drive
2.	181-9134	3	Ring Set, Piston	13.	185-6543	1	Sleeve, Crankshaft
	181-9135	3	Standard	14.	185-6544	1	Collar, Crankshaft
3.	185-6531	3	Pin, Piston	15.	185-7429	1	Ring
4.	185-6532	6	Circlip, Piston Pin	16.	185-6546	1	Metal, Crankshaft
5.	114-0449	3	Rod Assy, Connecting (Includes Bolt, Bearing and Bushing)		185-6547	1	Standard
6.	114-0450	3	Bush, Piston Pin		185-6548	1	.2mm Undersize
7.	185-6535	6	Bolt, Connecting Rod	17.	185-5938	2	.4mm Undersize
8.	185-6536	3	Metal, Crankpin		185-5941	2	Metal, Crankshaft
	185-6537	3	Standard		185-5942	2	Standard
	185-6538	3	.2mm Undersize	18.	185-5943	2	.2mm Undersize
9.	185-7376	3	Comp., Crankshaft				.4mm Undersize
10.	185-6540	1	Gear, Crank				

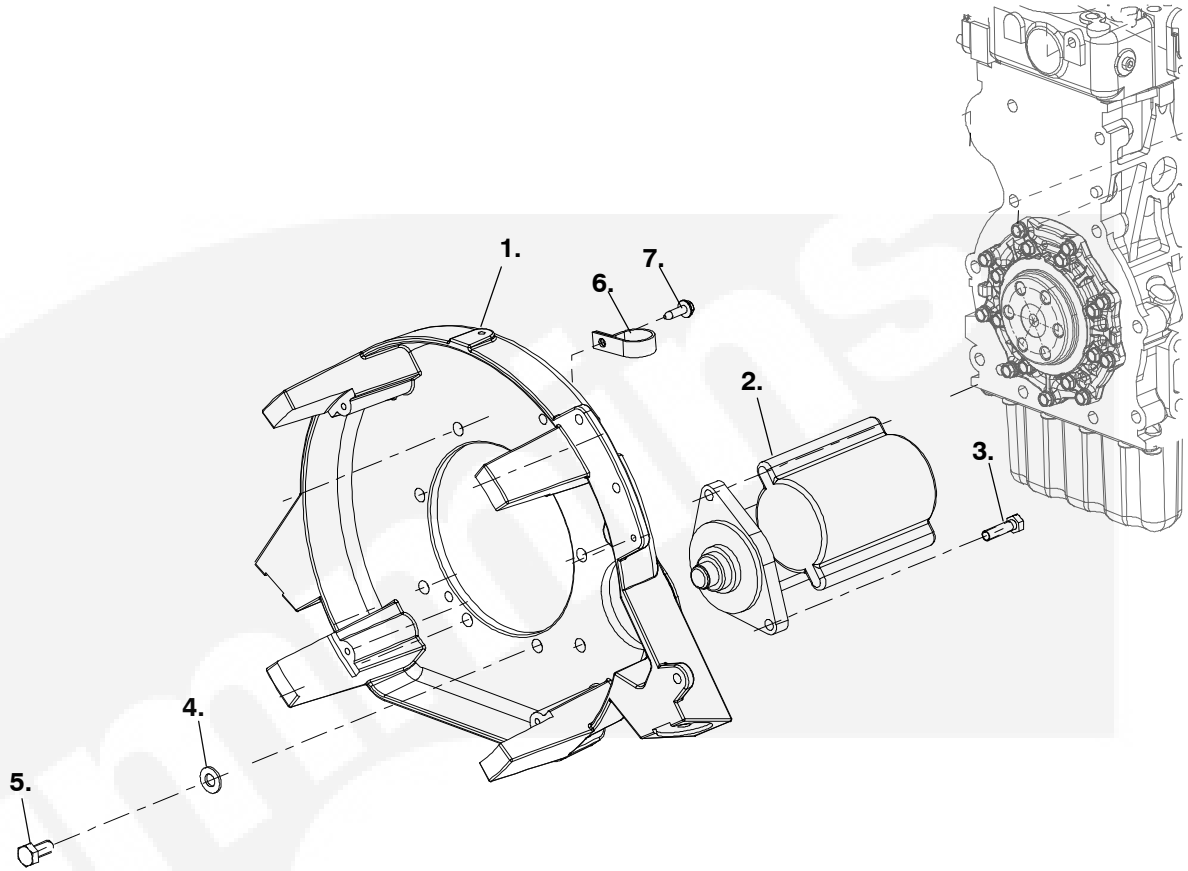
Camshaft



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	115-0541	6	Tappet	10.	185-6522	1	Bushing, Idle Gear
2.	185-6517	6	Rod, Push	11.	185-6523	1	Collar, Idle Gear
3.	181-9120	1	Camshaft Assy (Includes Parts Marked *)	12.	185-6524	1	Collar, Idle Gear
4.	185-5558	1	*Screw, Set	13.	185-6525	1	Circlip, Idle Gear
5.	185-6519	1	*Gear, Camshaft	14.	185-6526	1	Shaft, Idle Gear
6.	185-5560	1	*Key, Feather				
7.	185-6520	1	*Stopper, Camshaft				
8.	185-2388	5	*Bolt				
9.	185-6521	1	Gear Assy, Idle (Includes Bushing)				

* - Parts Included in Camshaft Assy.

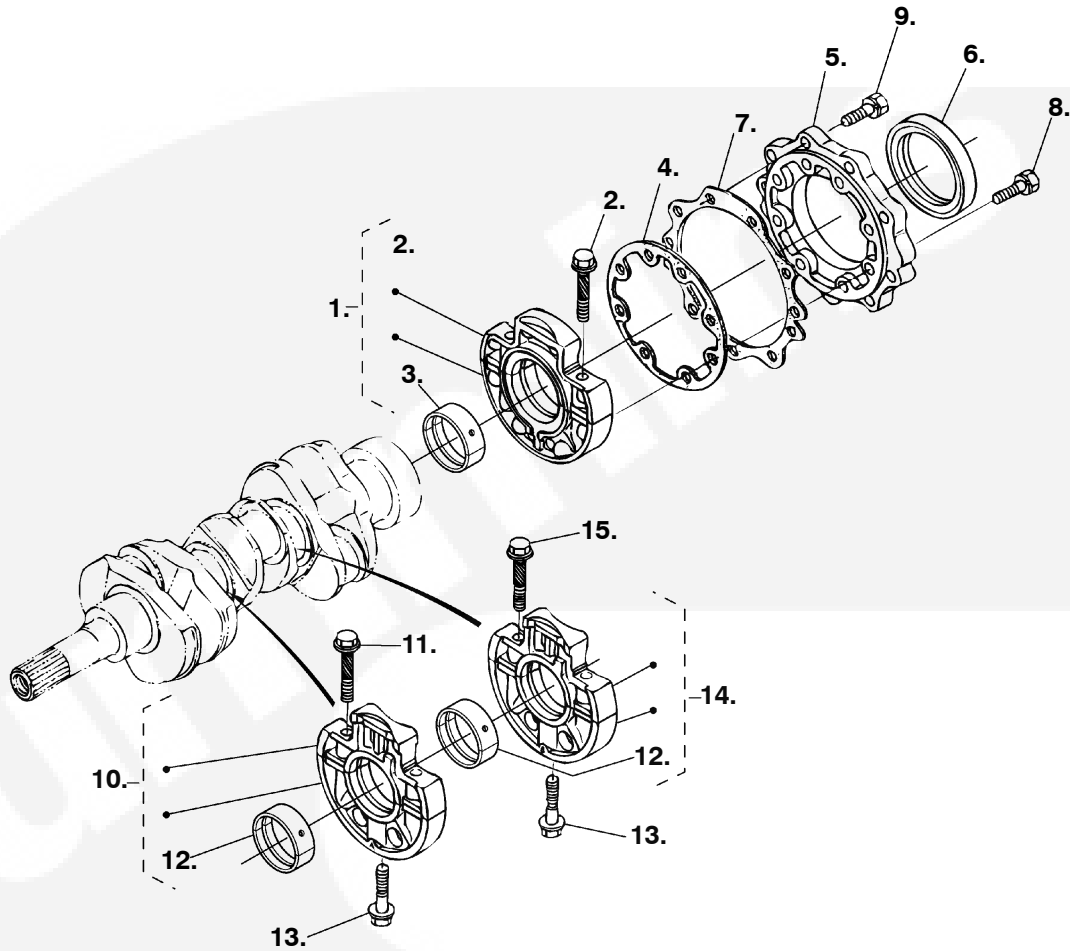
Flywheel Cover



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	104-2016	1	Housing, Flywheel	6.	332-1553	1	Clamp, Loop (Insulated)
2.	191-2348	1	Starter	7.	800-6399	1	Hex Flanged Head (M6 Locking)
3.	815-0781	2	Screw, Hex Thread Form (M8 x 1.25 x 30mm)				
4.	526-2120	8	Washer, Flat (M10)				
5.	815-0600	8	Screw, Hex (M10 x 1.25 x 20mm)				

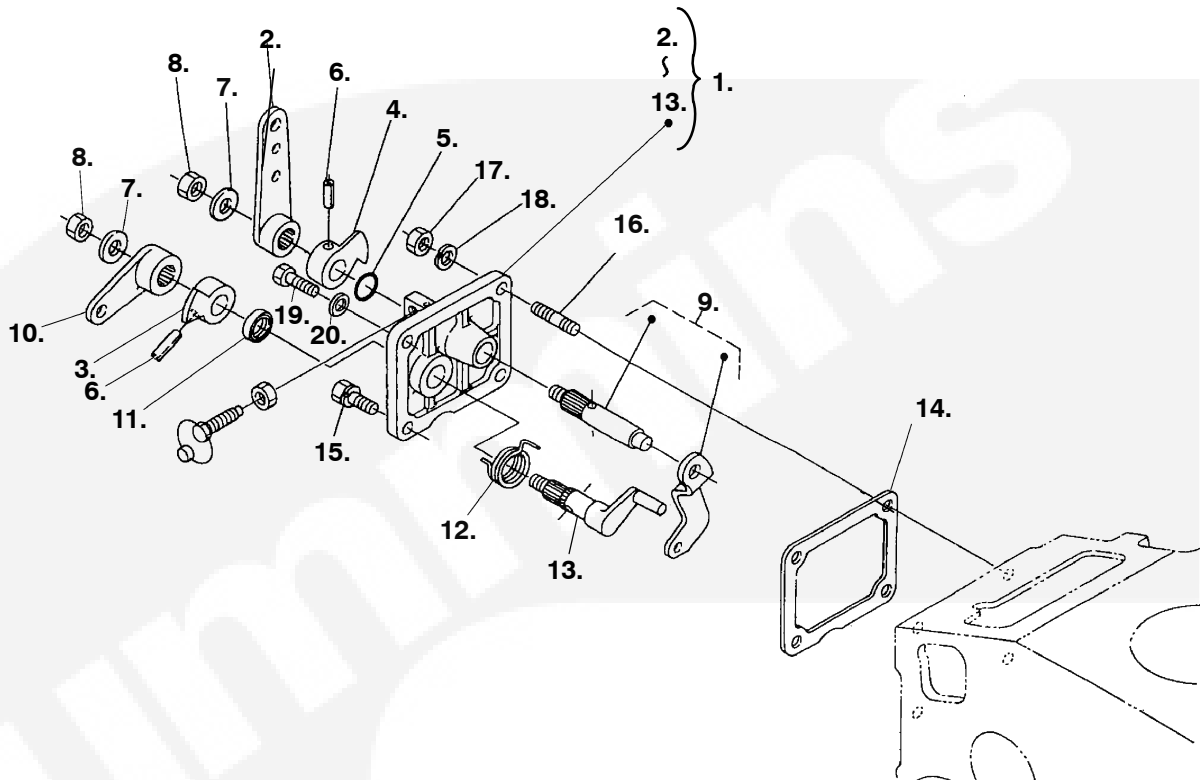


Main Bearing Case



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	104-2120	1	Case Assy, Main Bearing	9.	185-2390	9	Bolt
2.	185-6507	2	Bolt, Bearing Case	10.	104-2118	1	Case Assy, Main Bearing
3.			Metal, Crankshaft	11.	185-6507	2	Bolt, Bearing Case
	185-6552	1	Std	12.			Metal, Crankshaft
	104-2157	1	0.20mm		185-6549	2	Std
	104-2158	1	0.40mm		185-6550	2	0.20mm
4.	185-6869	1	Gasket, Bearing Case		185-6551	2	0.40mm
5.	232-4204	1	Cover, Bearing Case	13.	185-6513	2	Bolt
6.	185-6510	1	Seal, Oil	14.	104-2119	1	Case Assy, Main Bearing
7.	185-6871	1	Gasket, Bearing Case Cover	15.	185-6507	2	Bolt, Bearing Case
8.	185-2391	8	Bolt				

Speed Control Plate (Spec A)

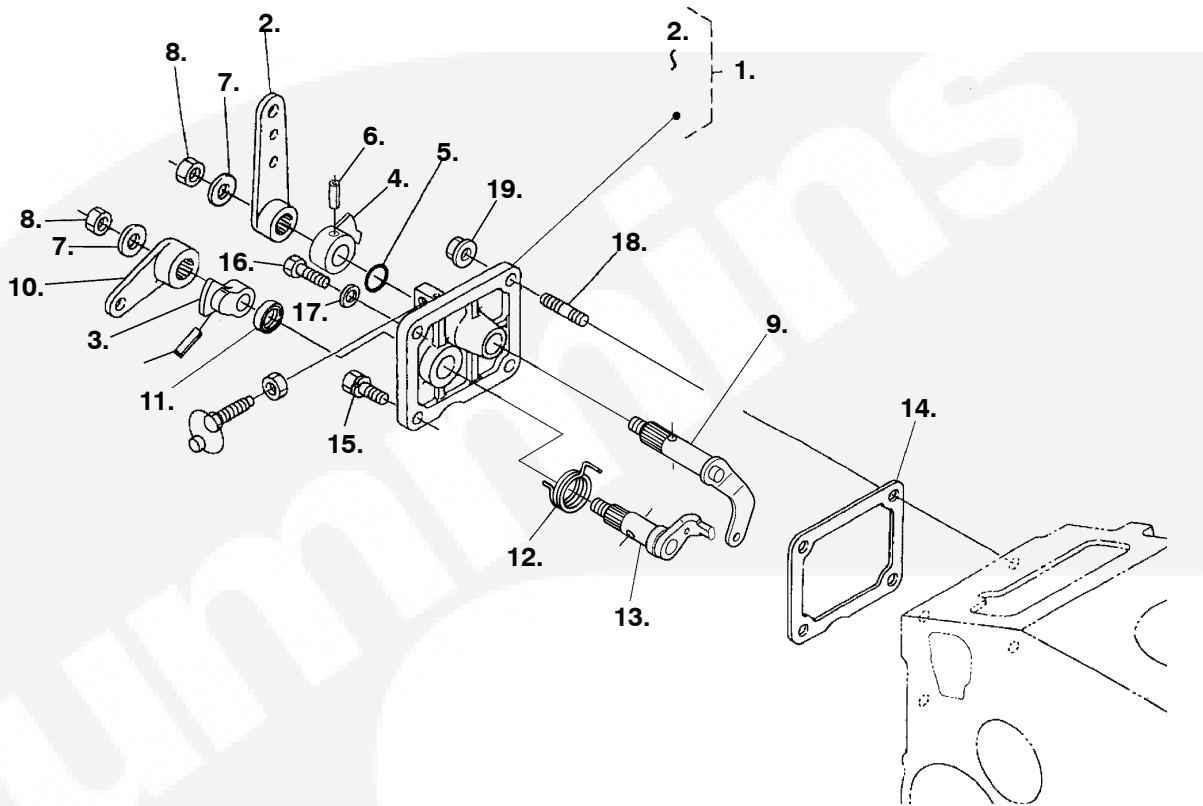


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	150-2931	1	Plate Assy, Control (Includes Parts Marked *)	12.	185-6614	1	*Spring, Return
2.	185-6607	1	*Lever, Speed Control	13.	185-6615	1	*Shaft, Stop Lever
3.	185-6608	1	*Lever, Speed Control	14.	185-6894	1	Gasket
4.	185-6609	1	*Lever, Speed Control	15.	185-2388	1	Bolt
5.	185-7433	1	*O'Ring	16.	185-7425	2	Stud
6.	185-2351	2	*Pin, Spring	17.	185-4255	2	Nut
7.	185-6610	2	*Washer, Plain	18.	185-6759	2	Washer, Spring
8.	185-6611	2	*Nut	19.	185-5688	1	Bolt
9.	150-2929	1	*Lever Assy, Governor	20.	185-2284	1	Gasket
10.	185-6613	1	*Lever, Engine Stop				
11.	185-2461	1	*Seal, Oil				

* - Parts Included in Control Plate Assy.



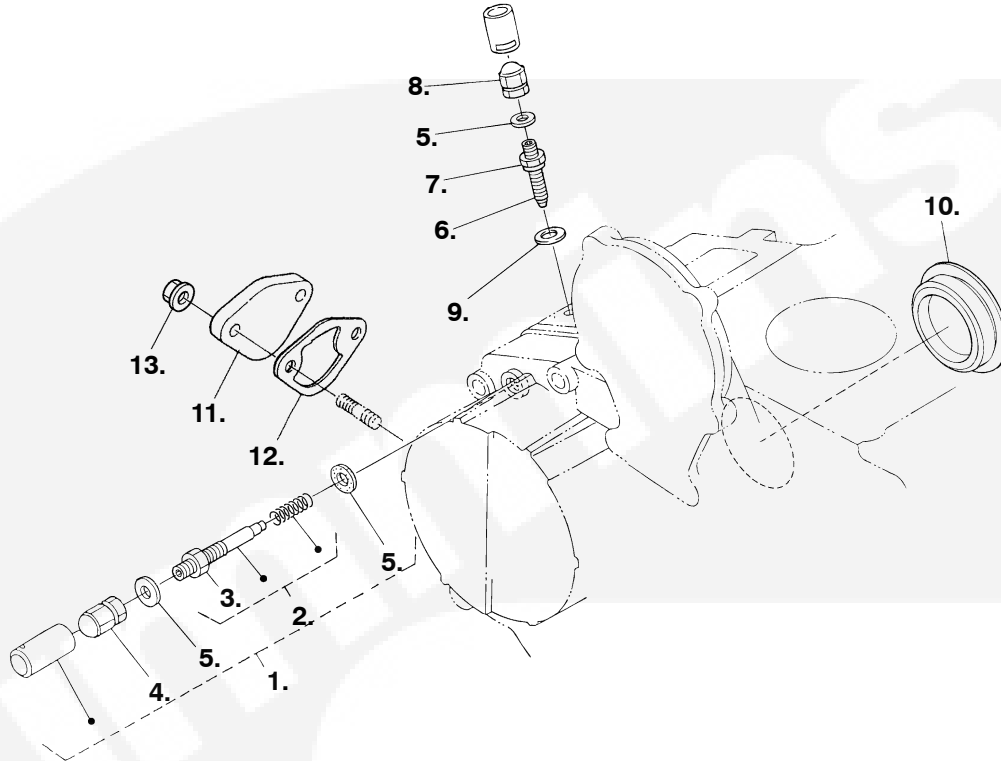
Speed Control Plate (Begin Spec B)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	152-0380	1	Plate Assy, Control (Includes Parts Marked *)	12.	185-6893	1	*Spring, Return
2.	185-6607	1	*Lever, Speed Control	13.	185-6615	1	*Shaft, Stop Lever
3.	185-6608	1	*Lever, Speed Control	14.	185-6894	1	Gasket
4.	181-9151	1	*Lever, Speed Control	15.	185-2388	1	Bolt
5.	185-7433	1	*O'Ring	16.	185-5688	1	Bolt
6.	185-2351	2	*Pin, Spring	17.	185-2284	1	Gasket
7.	185-6610	2	*Washer, Plain	18.	185-7425	2	Stud
8.	185-6611	2	*Nut	19.	185-7166	2	Nut, Flange
9.	150-2929	1	*Lever Assy, Governor				
10.	185-6613	1	*Lever, Engine Stop				
11.	185-2461	1	*Seal, Oil				

* - Parts Included in Control Plate Assy.

Governor Lever



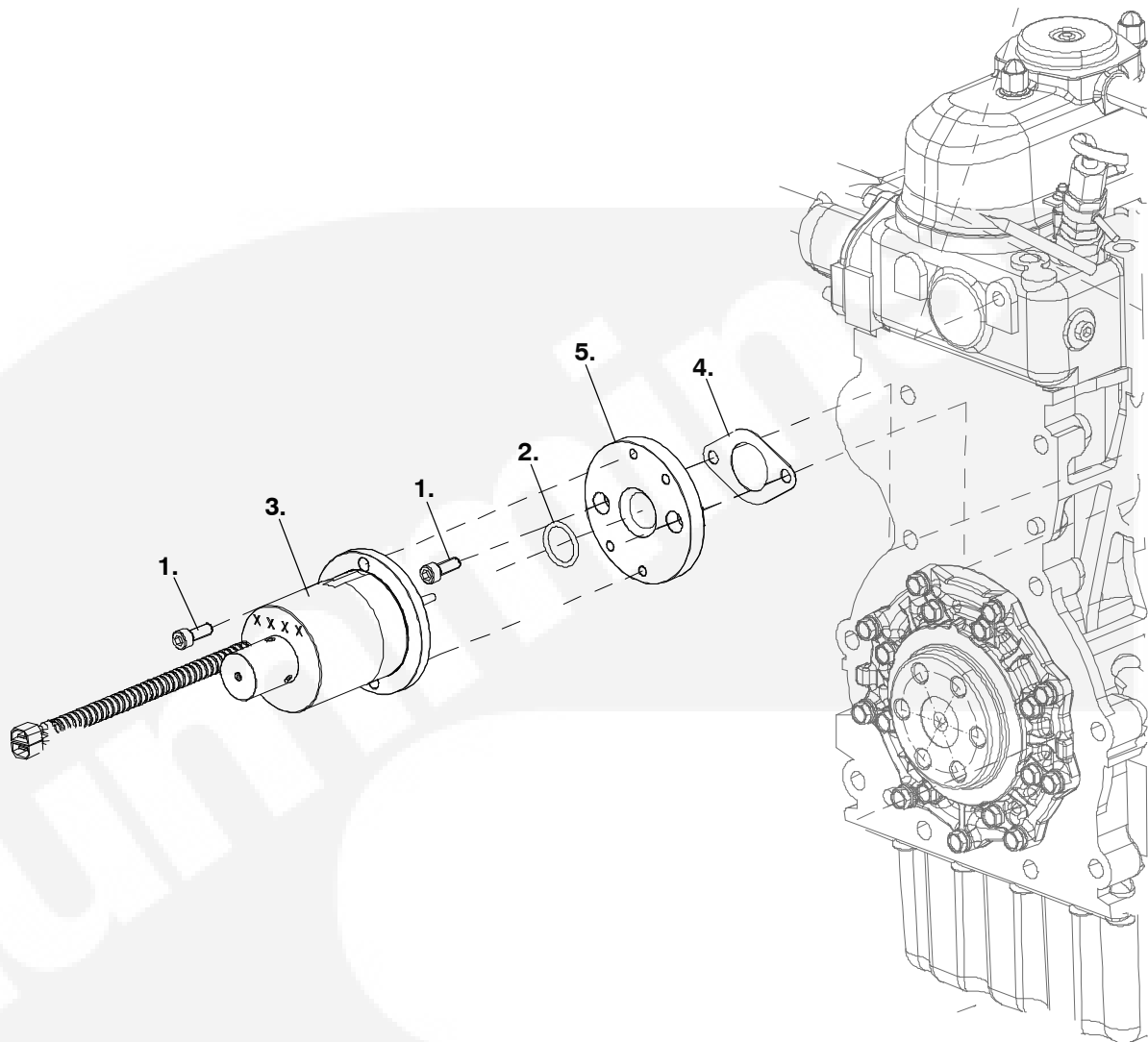
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	181-9113	1	Governor Idling
2.	181-9114	1	*Bolt Assy, Adjusting
3.	185-5648	1	*Nut
4.	181-9067	1	*Nut
5.	185-2284	2	*Gasket
6.	185-6577	1	*Bolt, Adjusting
7.	185-6931	1	Nut, Lock
8.	181-9067	1	Nut
9.	185-7313	1	Gasket

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10.			Cover, Hydraulic Pump
	120-1386	1	Spec A
	121-0262	1	Begin Spec B
11.	185-5798	1	Cover
12.	16261-5214-0	1	Gasket, Fuel Pump
13.	185-7166	1	Nut, Flange

* - Parts Included in Governor Lever Assy.



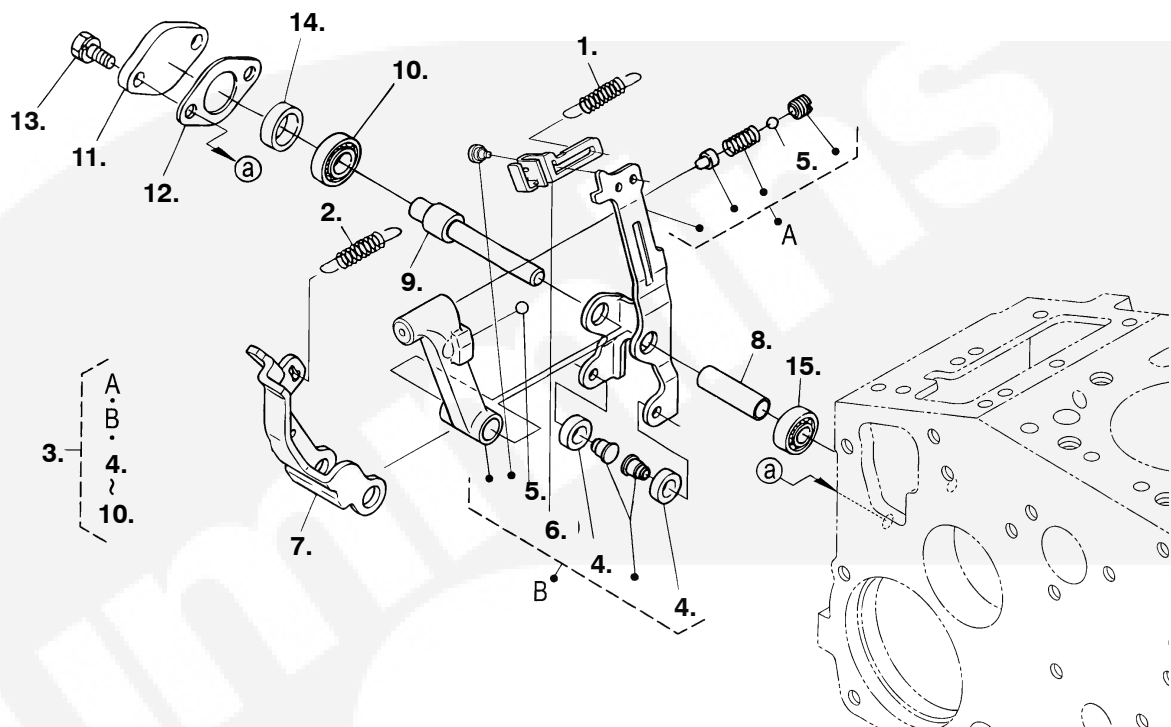
Actuator



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	725-1027	4	Screw, Socket Head Cap (M6 x 1.00 x 16mm)	3.	150-2935	1	Actuator, Linear
2.	509-0510	1	O'Ring, Seal	4.	184-0071	1	Gasket
				5.	150-2936	1	Spacer, Governor



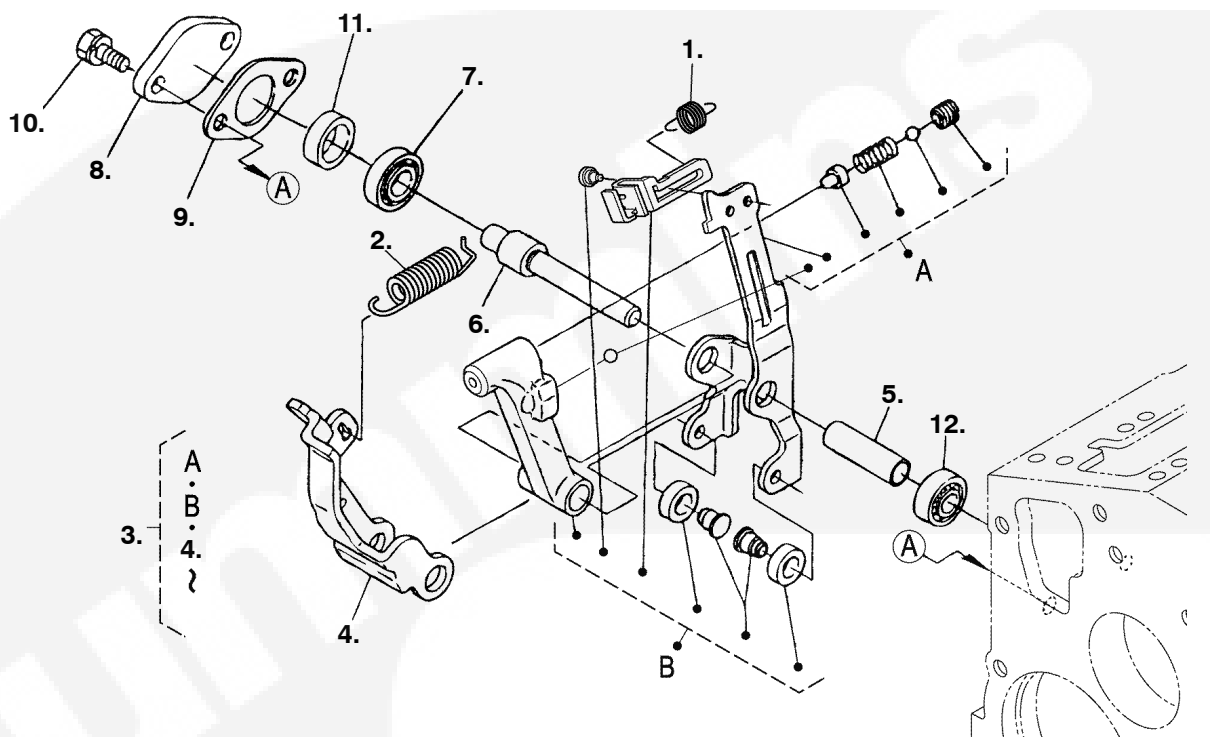
Governor (Spec A)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	506-0056	1	Spring, Start	9.	115-0540	1	*Shaft, Fork Lever
2.	506-0055	1	Spring, Governor	10.	185-6600	1	*Bearing, Miniature
3.	150-2930	1	Lever Assy, Fork (Includes Parts Marked *)	11.	150-2927	1	*Cover, Fork Lever Shaft
4.	510-0252	1	*Roller	12.	185-6603	1	Gasket
5.	150-0740	2	*Bearing	13.	185-2386	2	Bolt
6.	150-2867	2	*Lever, Thrust	14.	185-6604	1	Collar
7.	150-2867	1	*Lever, Fork	15.	185-6605	1	Bearing, Miniature
8.	115-0539	1	*Shaft, Fork Lever				

* - Parts Included in Fork Lever Assy.

Governor (Begin Spec B)

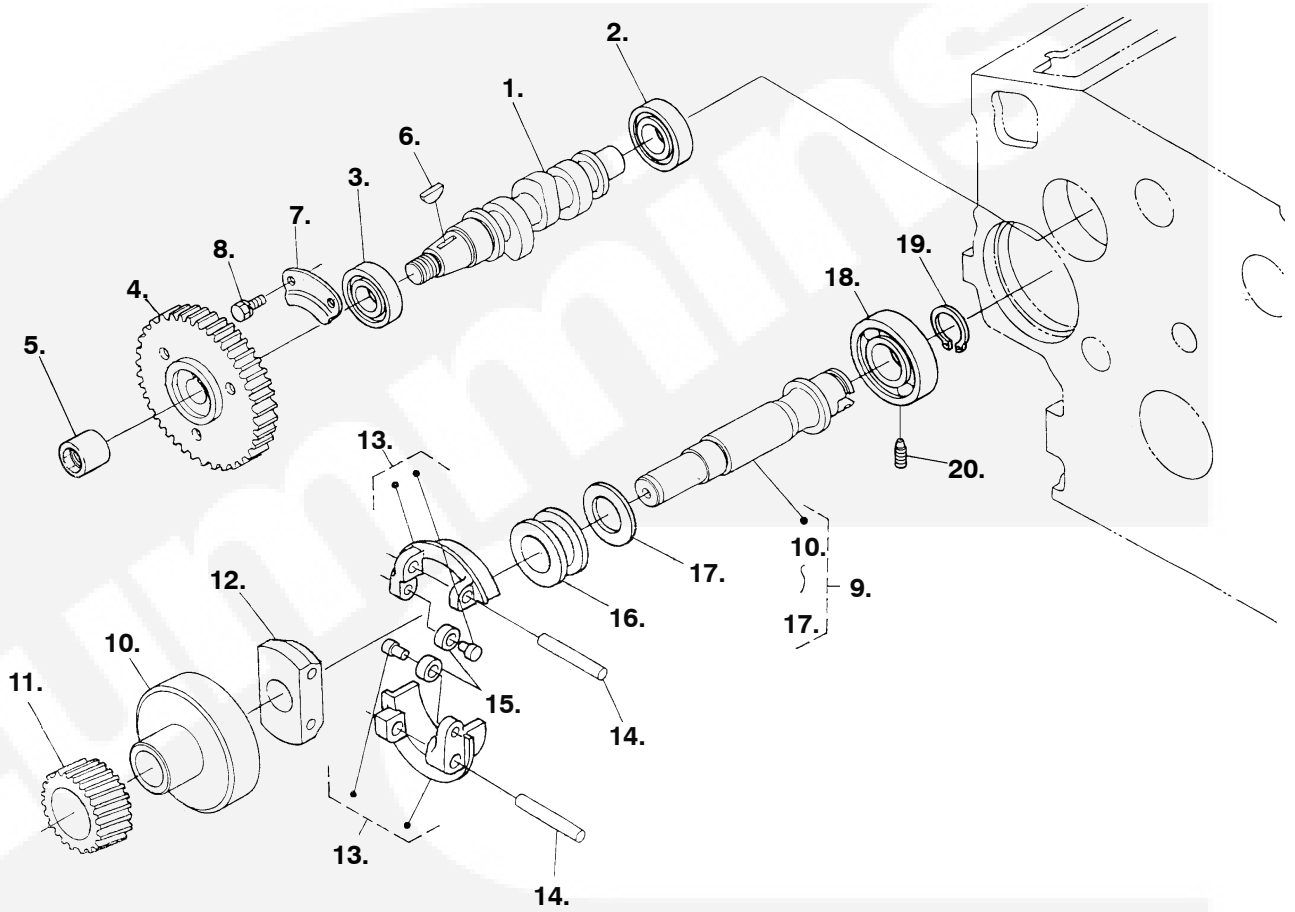


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	185-6605	1	Spring, Start
2.	506-0055	1	Spring, Governor
3.	1G673-5601-0	1	Lever Assy, Fork (Includes Parts Marked *)
4.	150-2997	1	*Lever, Fork
5.	150-2998	1	*Shaft, Fork Lever
6.	150-2999	1	*Shaft, Fork Lever
7.	185-6600	1	*Bearing, Miniature
8.	185-6602	1	*Cover, Fork Lever Shaft

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
9.	185-6603	1	Gasket
10.	185-2386	2	Bolt
11.	185-6604	1	Collar
12.	185-6605	1	Bearing, Miniature

* - Parts Included in Fork Lever Assy.

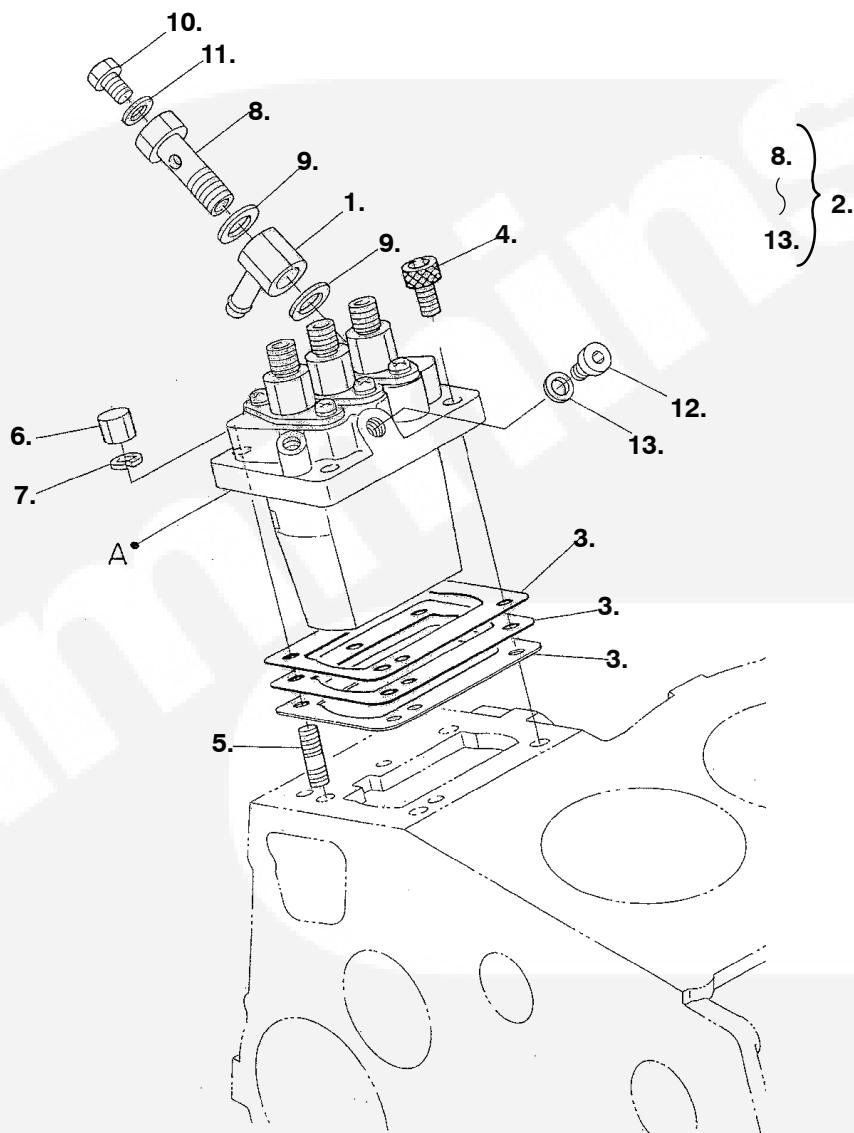
Fuel Camshaft



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	185-6875	1	Camshaft, Fuel
2.	181-9122	1	Bearing, Ball
3.	181-9123	1	Bearing, Ball
4.	185-6558	1	Gear, Injection Pump
5.	185-6560	1	Nut
6.	185-6561	1	Key
7.	185-6562	1	Stopper, Fuel Camshaft
8.	185-2388	2	Bolt
9.	150-2928	1	Assy Shaft, Governor
10.	150-2925	1	Holder, Governor Gear
11.	507-0030	1	Gear, Governor

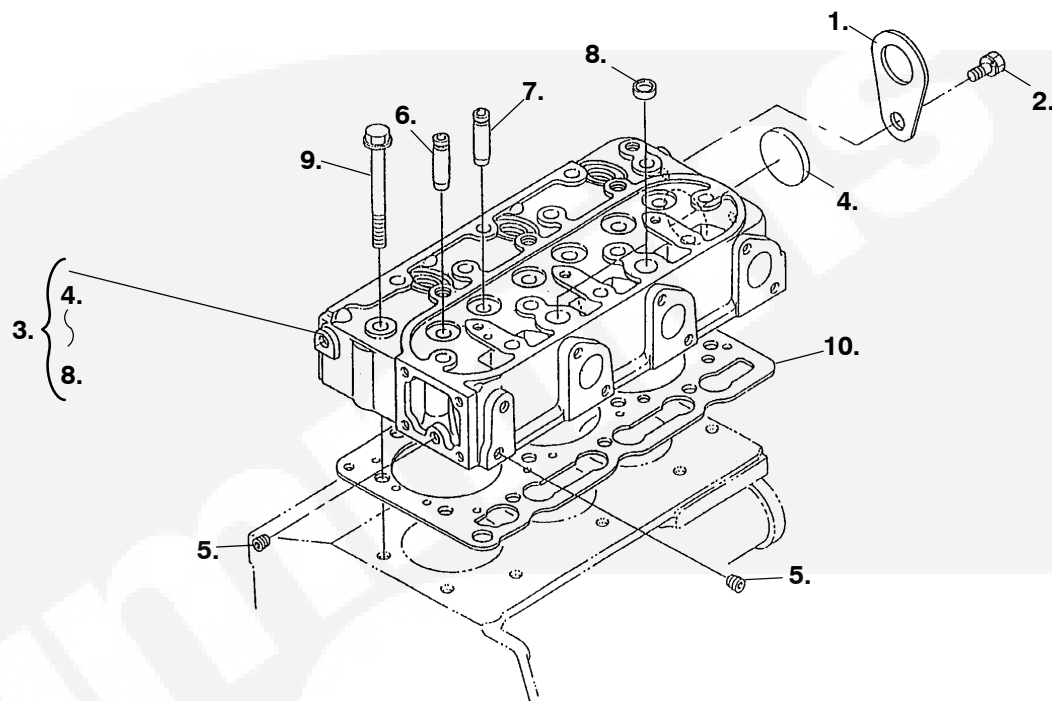
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
12.	150-2924	1	Holder, Governor Weight
13.	150-2923	2	Comp. Weight, Governor Spec A
	150-2995	2	Begin Spec B
14.	185-6569	2	Shaft, Governor Weight
15.	510-0252	2	Roller
16.	150-2926	1	Sleeve, Governor
17.	526-2366	1	Washer, Thruster
18.	510-0251	1	Bearing, Ball
19.	185-6572	1	Clip, Governor Clip
20.	185-6573	1	Screw, Set

Injection Pump



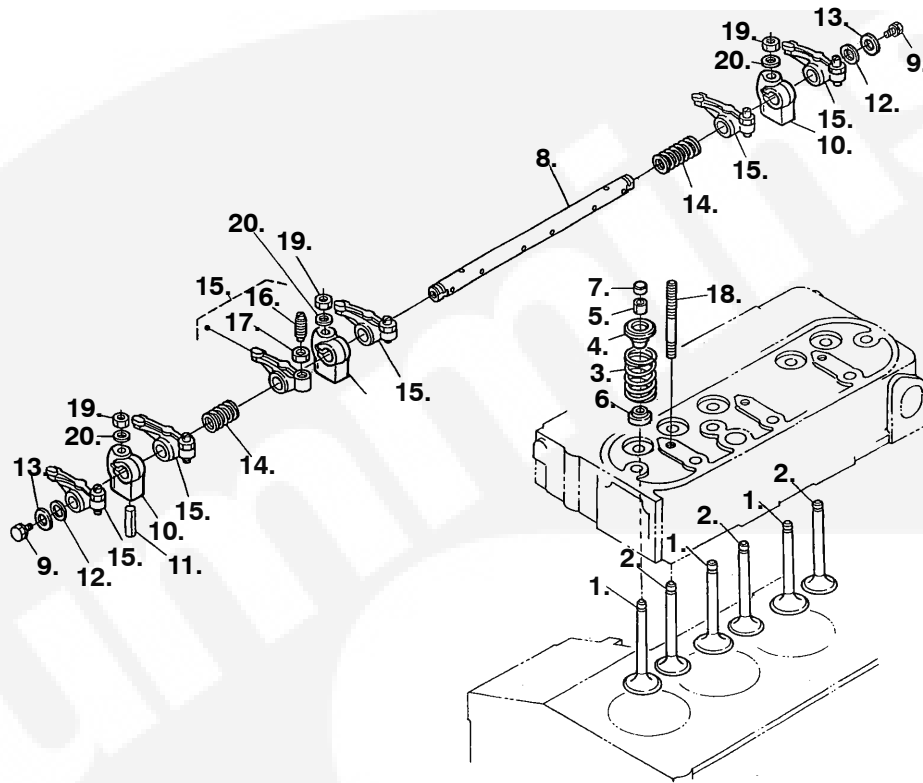
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	501-1046	1	Joint, Eye	5.	185-5624	2	Stud
2.	185-6882	1	Assy Pump, Injection	6.	185-5625	2	Nut
3.			Shim, Injection Pump	7.	185-6759	2	Washer, Spring
	147-0970	1	0.175mm	8.	185-6887	1	Bolt, Joint
	181-9086	1	0.200mm	9.	185-5661	1	Gasket
	185-6739	1	0.250mm	10.	185-5662	1	Screw
	185-6845	1	0.300mm	11.	185-5663	1	Gasket
	147-0971	1	0.350mm	12.	185-6888	1	Plug
4.	185-5623	2	Bolt, Hex Socket Head	13.	185-5820	1	Gasket

Cylinder Head



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	185-2414	2	Hook, Engine	6.	181-9118	3	Guide, Inlet Valve
2.	185-6956	2	Bolt	7.	181-9119	3	Guide, Exhaust Valve
3.			Comp., Cylinder head	8.	185-2413	2	Cap, Sealing
	110-4023	1	Spec A	9.	185-6477	14	Bolt, Cylinder Head
	110-4084	1	Begin Spec B	10.	181-9222	1	Gasket, Cylinder Head
4.	185-2411	1	Cap, Seal				
5.	185-2188	2	Plug				

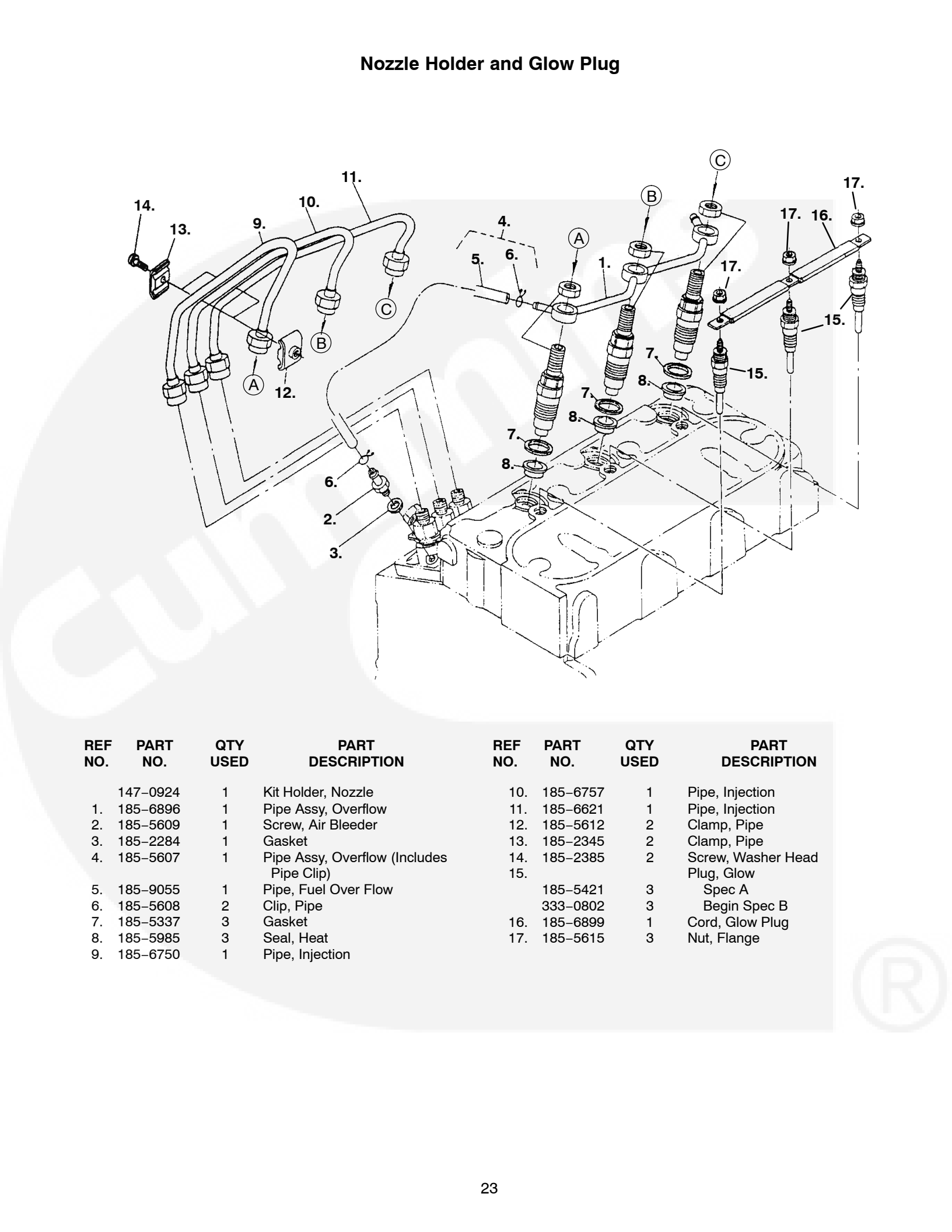
Valve and Rocker Arm



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	110-4021	3	Valve, Inlet	11.	185-7441	1	Pin, Spring
2.	110-4022	3	Valve, Exhaust	12.	185-6689	2	Washer, Arm Shaft
3.	185-6683	6	Spring, Valve	13.	185-7395	2	Washer, Plain
4.	181-9117	6	Retainer, Valve Spring	14.	185-6691	2	Spring, Rocker Arm
5.	185-3827	6	Collet, Valve Spring	15.	185-6693	6	Assy, Rocker Arm
6.	185-7300	6	Seal, Valve Stem	16.	185-6694	6	Screw, Adjusting
7.	185-2080	6	Cap, Valve	17.	185-6695	6	Nut
8.	185-7439	1	Shaft Assy, Rocker Arm	18.	185-6688	3	Stud
9.	185-2386	2	Bolt	19.	185-2179	3	Nut
10.	185-6687	3	Bracket, Rocker Arm	20.	185-2184	3	Washer, Plain

Nozzle Holder and Glow Plug

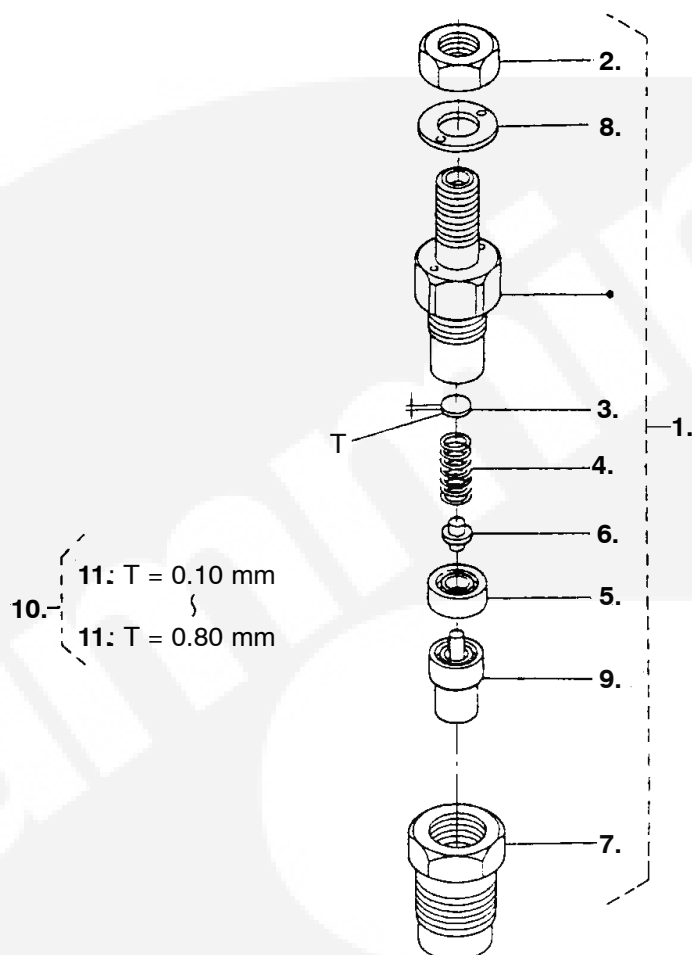
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	147-0924	1	Kit Holder, Nozzle	10.	185-6757	1	Pipe, Injection
1.	185-6896	1	Pipe Assy, Overflow	11.	185-6621	1	Pipe, Injection
2.	185-5609	1	Screw, Air Bleeder	12.	185-5612	2	Clamp, Pipe
3.	185-2284	1	Gasket	13.	185-2345	2	Clamp, Pipe
4.	185-5607	1	Pipe Assy, Overflow (Includes Pipe Clip)	14.	185-2385	2	Screw, Washer Head Plug, Glow
5.	185-9055	1	Pipe, Fuel Over Flow	15.	185-5421	3	Spec A
6.	185-5608	2	Clip, Pipe		333-0802	3	Begin Spec B
7.	185-5337	3	Gasket	16.	185-6899	1	Cord, Glow Plug
8.	185-5985	3	Seal, Heat	17.	185-5615	3	Nut, Flange
9.	185-6750	1	Pipe, Injection				



Nozzle Holder and Glow Plug

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	147-0924	1	Kit Holder, Nozzle	10.	185-6757	1	Pipe, Injection
1.	185-6896	1	Pipe Assy, Overflow	11.	185-6621	1	Pipe, Injection
2.	185-5609	1	Screw, Air Bleeder	12.	185-5612	2	Clamp, Pipe
3.	185-2284	1	Gasket	13.	185-2345	2	Clamp, Pipe
4.	185-5607	1	Pipe Assy, Overflow (Includes Pipe Clip)	14.	185-2385	2	Screw, Washer Head
5.	185-9055	1	Pipe, Fuel Over Flow	15.	185-5421	3	Spec A
6.	185-5608	2	Clip, Pipe		333-0802	3	Begin Spec B
7.	185-5337	3	Gasket	16.	185-6899	1	Cord, Glow Plug
8.	185-5985	3	Seal, Heat	17.	185-5615	3	Nut, Flange
9.	185-6750	1	Pipe, Injection				

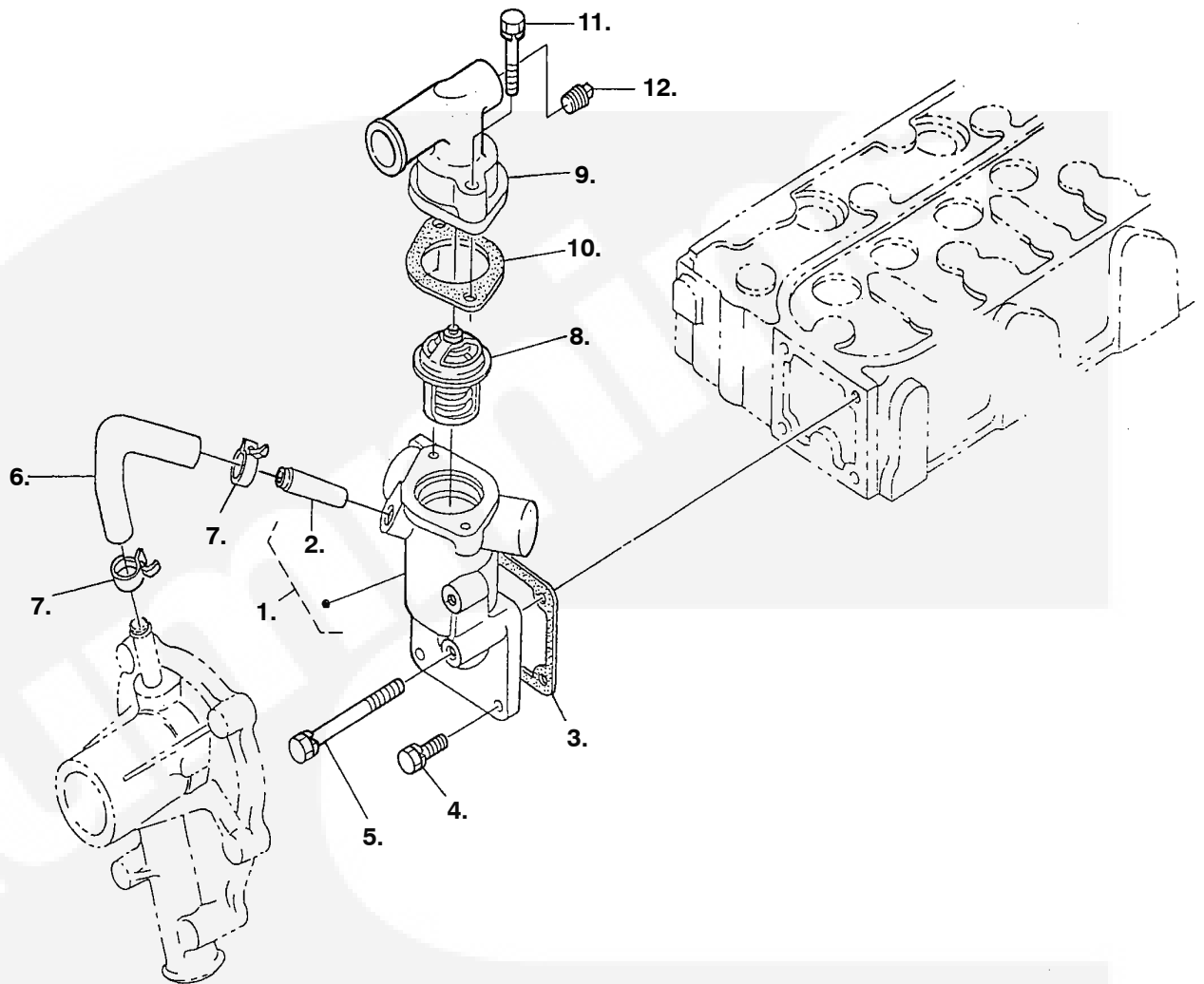
Nozzle Holder Components



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	147-0924	3	Kit, Holder Nozzle (Includes Parts Marked)	11.			Washer, Adjusting
2.	185-6900	3	*Nut		185-6909	3	.10mm
3.	185-6901	3	*Washer, Adjusting		185-6910	3	.20mm
4.	185-6902	3	*Spring, Nozzle		185-6911	3	.30mm
5.	185-6903	3	*Piece, Distance		185-6912	3	.40mm
6.	185-6904	3	*Rod, Push		185-6913	3	.50mm
7.	185-6905	3	*Nut, Nozzle		185-6914	3	.52mm
8.	185-6906	3	*Washer		185-6915	3	.54mm
9.	185-6907	3	*Piece, Nozzle		185-6916	3	.56mm
10.	185-6908	3	*Washer Assy, Adjust (Includes Adjusting Washers)		185-6917	3	.58mm
					185-6918	3	.80mm

* - Parts Included in Nozzle Holder Assy.

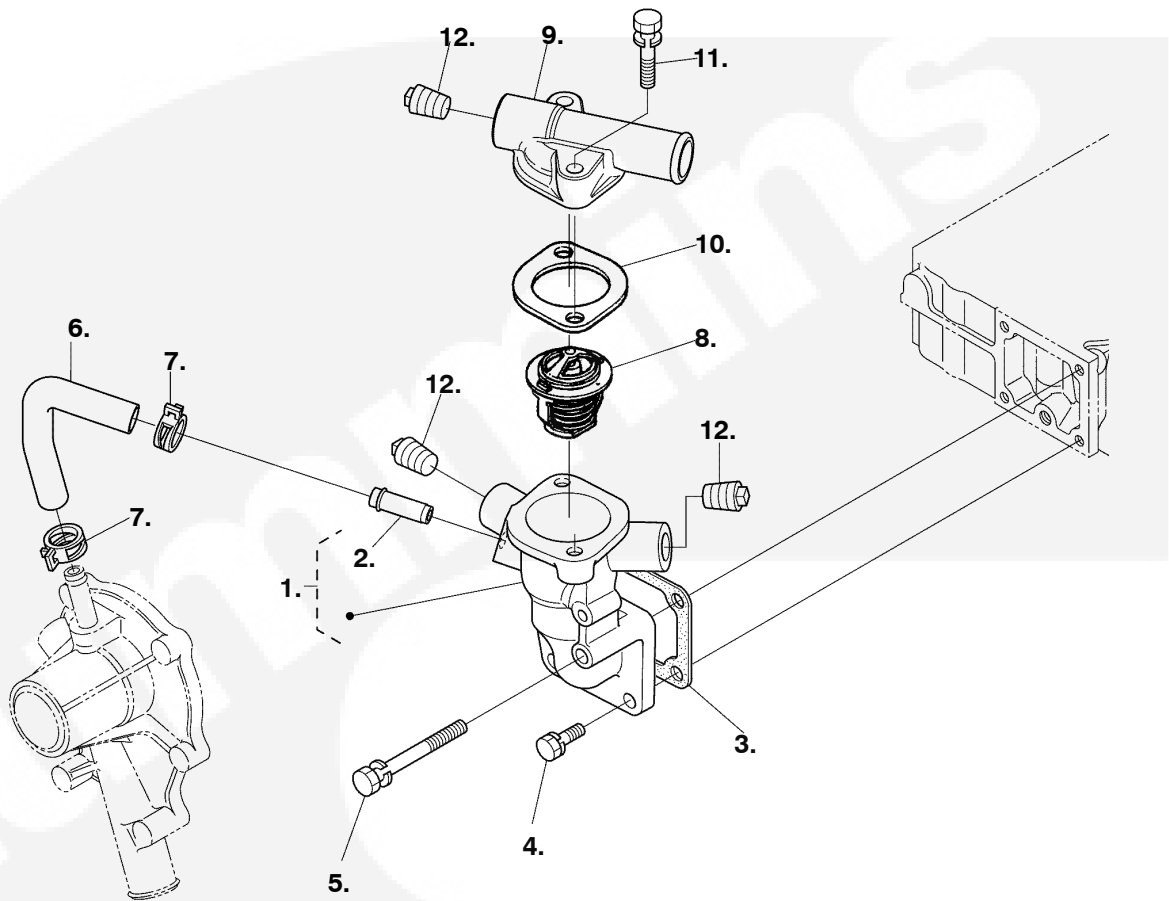
Water Flange



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	185-7297	1	Flange, Water (Includes Water Return Pipe)	7.	185-6667	2	Band, Pipe
2.	185-5719	1	Pipe, Water Return	8.	185-6005	1	Thermostat
3.	185-6922	1	Gasket, Water Flange	9.	185-7298	1	Cover, Thermostat
4.	185-2388	3	Bolt	10.	130-6362	1	Gasket, Thermostat
5.	185-7069	1	Bolt	11.	185-2365	2	Bolt
6.	185-6666	1	Pipe, Water Return	12.	185-5826	1	Plug

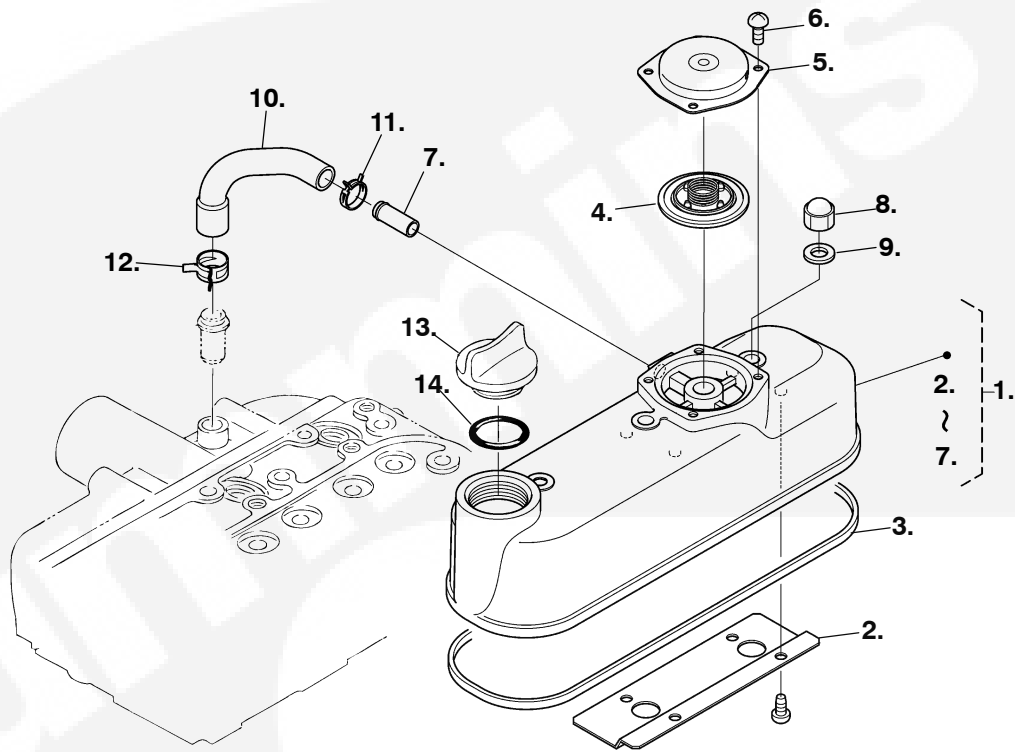


Water Flange (Begin Spec B)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	185-7297	1	Flange, Water (Includes Water Return Pipe)	7.	185-6667	2	Band, Pipe
2.	185-5719	1	Pipe, Water Return	8.	185-6005	1	Thermostat
3.	185-6922	1	Gasket, Water Flange	9.	185-7298	1	Cover, Thermostat
4.	185-2388	3	Bolt	10.	130-6332	1	Gasket, Thermostat
5.	185-7069	1	Bolt	11.	185-2564	2	Bolt
6.	185-6666	1	Pipe, Water Return	12.	505-2533	3	Plug

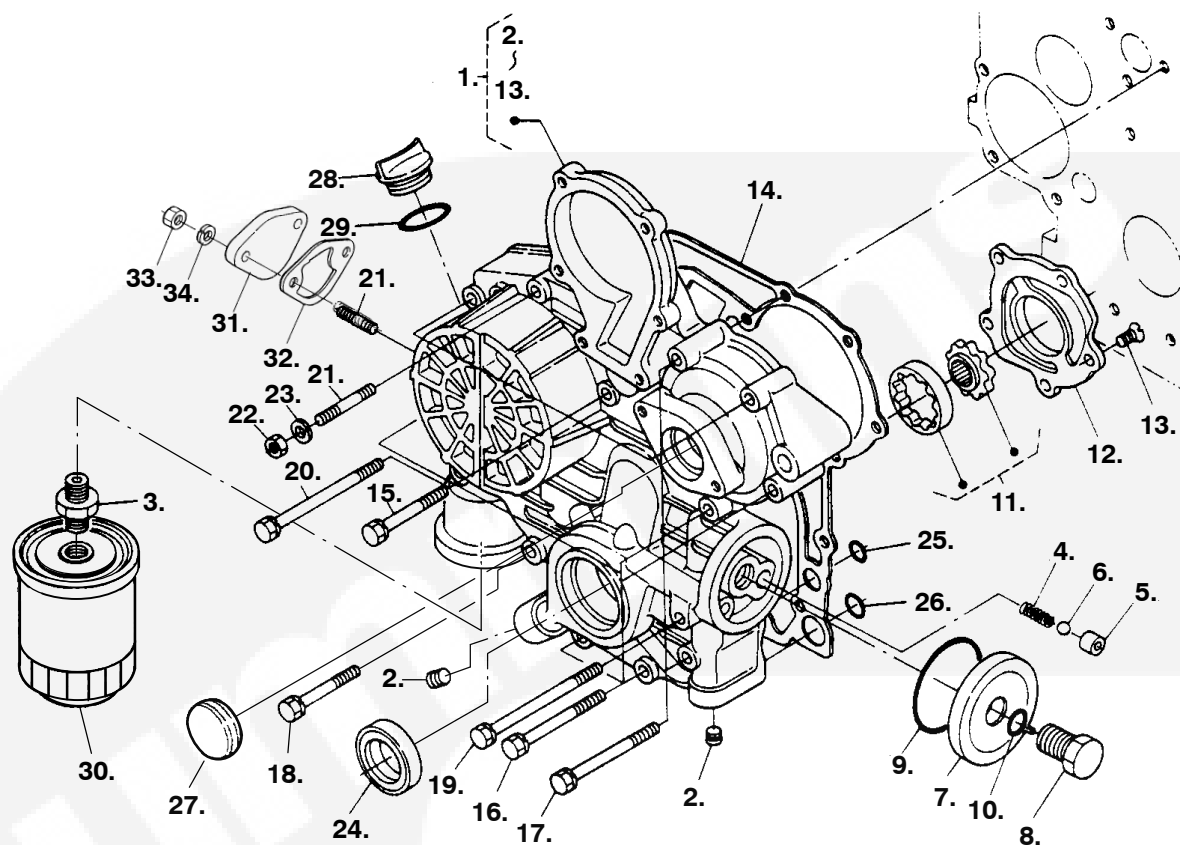
Cylinder Head Cover



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	181-9221	1	Assy Cover, Cylinder Head Spec A	7.	185-6103	1	Pipe, Water Return
	134-5384	1	Begin Spec B	8.	185-6394	3	Nut
2.	181-9219	1	Shield, Breather (Spec A)	9.	185-2291	3	Gasket
3.	185-6868	1	Gasket, Head Cover	10.	181-9220	1	Tube, Breather
4.	181-9241	1	Comp Valve, Breather	11.	181-9025	1	Clamp, Hose
5.	181-9238	1	Cover, Breather	12.	181-9109	1	Clamp, Hose
6.	185-3055	4	Screw, Pan Head	13.	181-9000	1	Plug, Oil Filler
				14.	185-7426	1	O'Ring



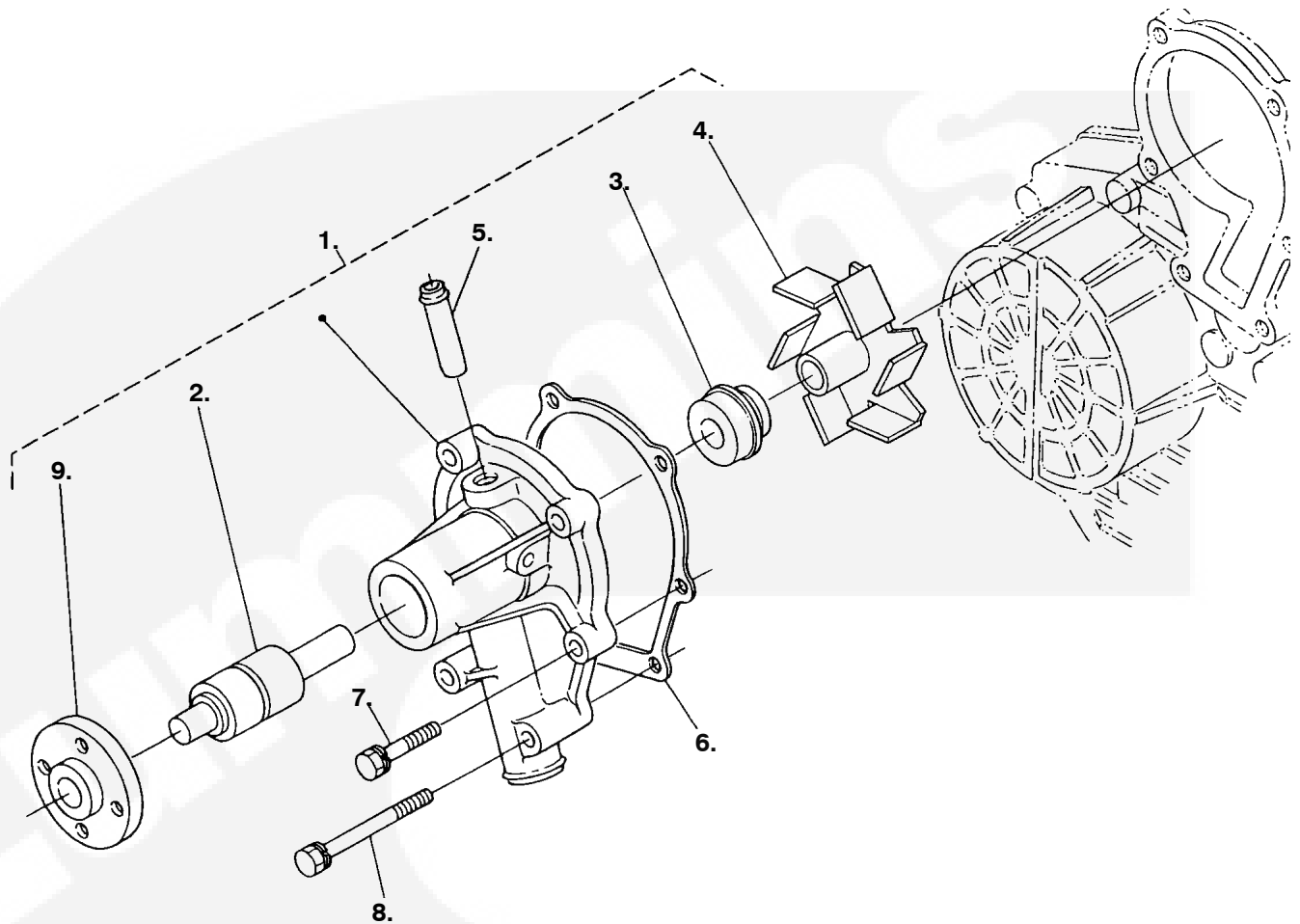
Gearcase



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	181-9099	1	Gearcase Assy (Includes Parts Marked *)	19.	185-6491	2	Bolt
2.	185-6481	4	*Plug	20.	185-6492	1	Bolt
3.	185-2124	1	*Fitting, Connector	21.	185-7425	3	Stud
4.	185-6482	1	*Spring	22.	185-4255	1	Nut
5.	185-6483	1	*Seat, Valve	23.	185-6759	1	Washer, Spring
6.	185-6484	1	*Ball	24.	185-6864	1	Seal, Oil
7.	185-5741	1	*Cover	25.	185-7424	2	O'Ring
8.	185-5742	1	*Bolt	26.	185-5744	2	O'Ring
9.	185-5743	1	*O'Ring	27.	185-7216	1	Plug
10.	185-5869	1	*O'Ring	28.	185-7299	1	Cover, Oil Fill
11.	185-6485	1	*Rotor, Oil Pump	29.	185-2349	1	O'Ring
12.	185-6486	1	*Cover, Oil Pump	30.	185-5835	1	Filter, Oil
13.	185-6487	5	*Screw, Countersunk Head	31.	185-5798	1	Cover
14.	185-6863	1	Gasket, Gearcase	32.	185-6580	1	Gasket, Fuel Pump
15.	185-5833	3	Bolt	33.	181-9013	1	Nut
16.	185-7069	4	Bolt	34.	185-6759	1	Washer, Spring
17.	185-6665	2	Bolt				
18.	185-6490	1	Bolt				

* - Parts Included in Gearcase Assy.

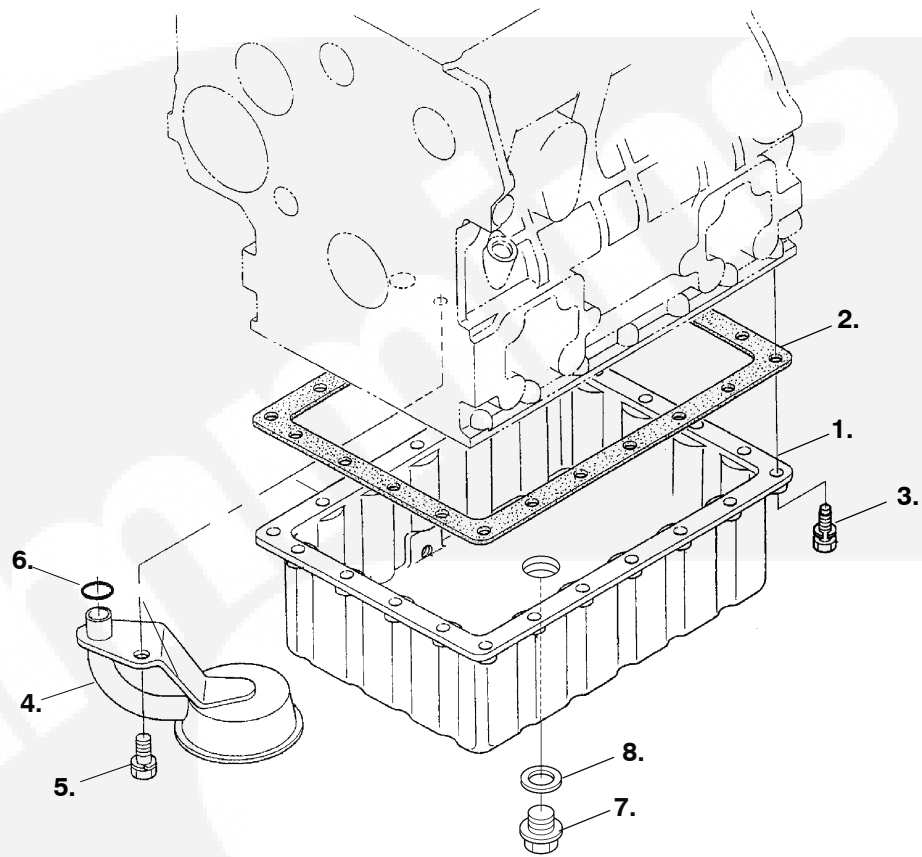
Water Pump Components



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	181-9108	1	Pump, Engine Cooling (Includes Parts Marked *)	7.	185-6677	4	Bolt
2.	181-9116	1	*Bearing	8.	181-9007	2	Bolt
3.	181-9233	1	*Seal Assy, Mechanical	9.	185-6672	1	Flange, Water Pump
4.	181-9115	1	*Impeller, Pump Water				
5.	185-6675	1	*Pipe, Water Return				
6.	185-7299	1	*Gasket, Water Pump				

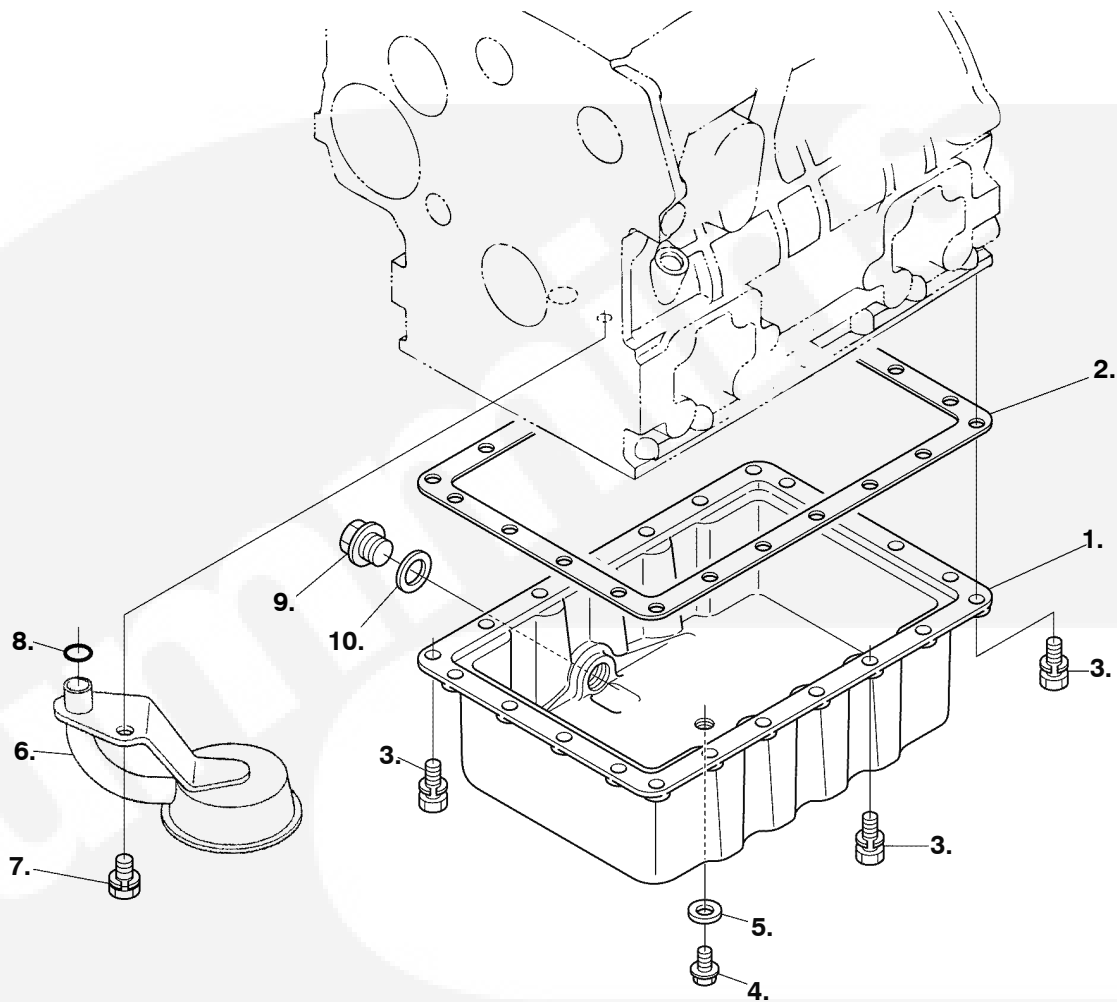
* - Parts Included in Water Pump Assy.

Oil Pan (Spec A)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	102-1573	1	Pan, Oil	5.	185-6763	1	Bolt
2.	185-7214	1	Gasket, Oil Pan	6.	185-7421	1	O'Ring
3.	800-6370	22	Bolt	7.	185-6046	1	Plug, Drain
4.	122-0932	1	Filter, Oil	8.	509-0502	1	Gasket

Oil Pan (Begin Spec B)

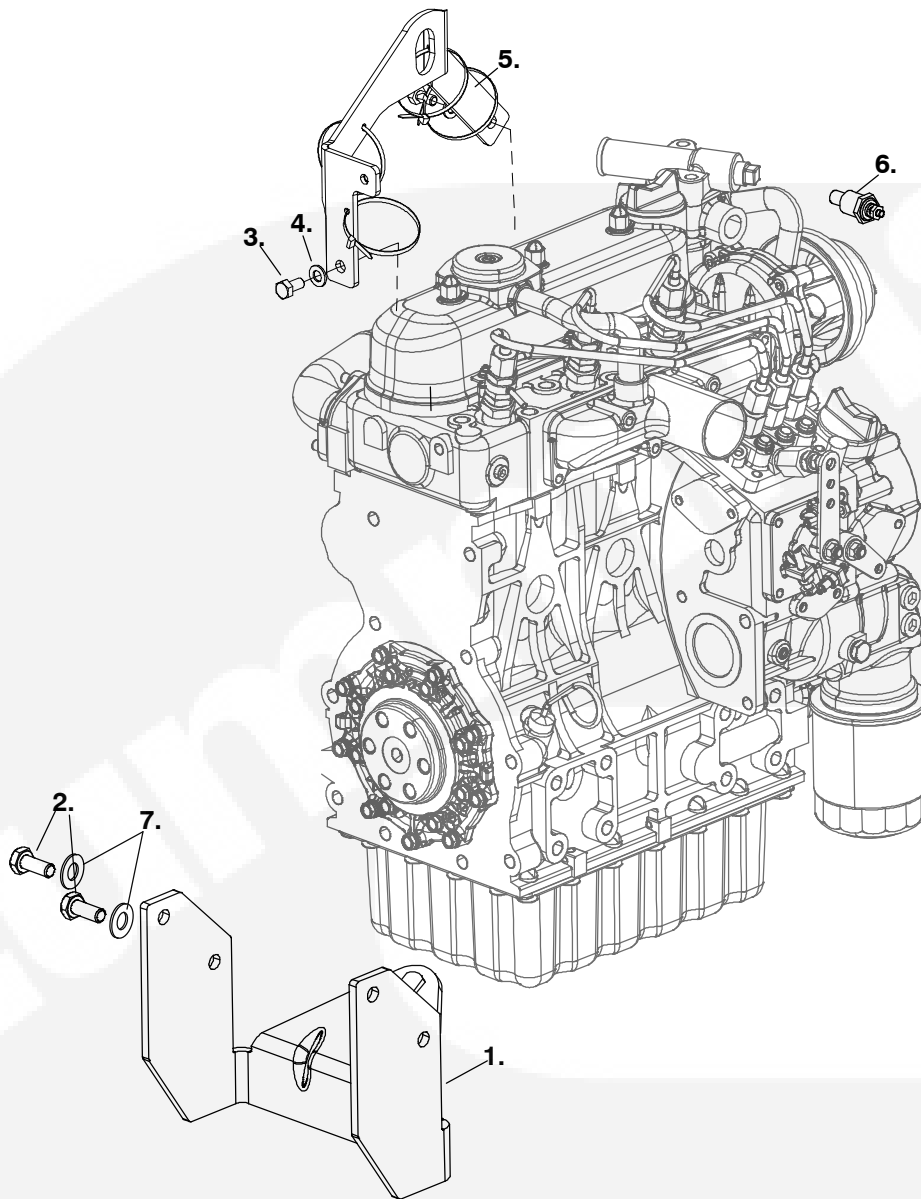


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	102-1573	1	Pan, Oil
2.	185-7214	1	Gasket, Oil Pan
3.	185-2559	22	Bolt
4.	517-0418	1	Plug, Drain
5.	509-0502	1	Washer, Seal

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6.	122-0932	1	Filter, Oil
7.	185-2563	1	Bolt
8.	185-7421	1	O'Ring
9.	185-6046	1	Plug, Drain
10.	517-0450	1	Washer, Seal

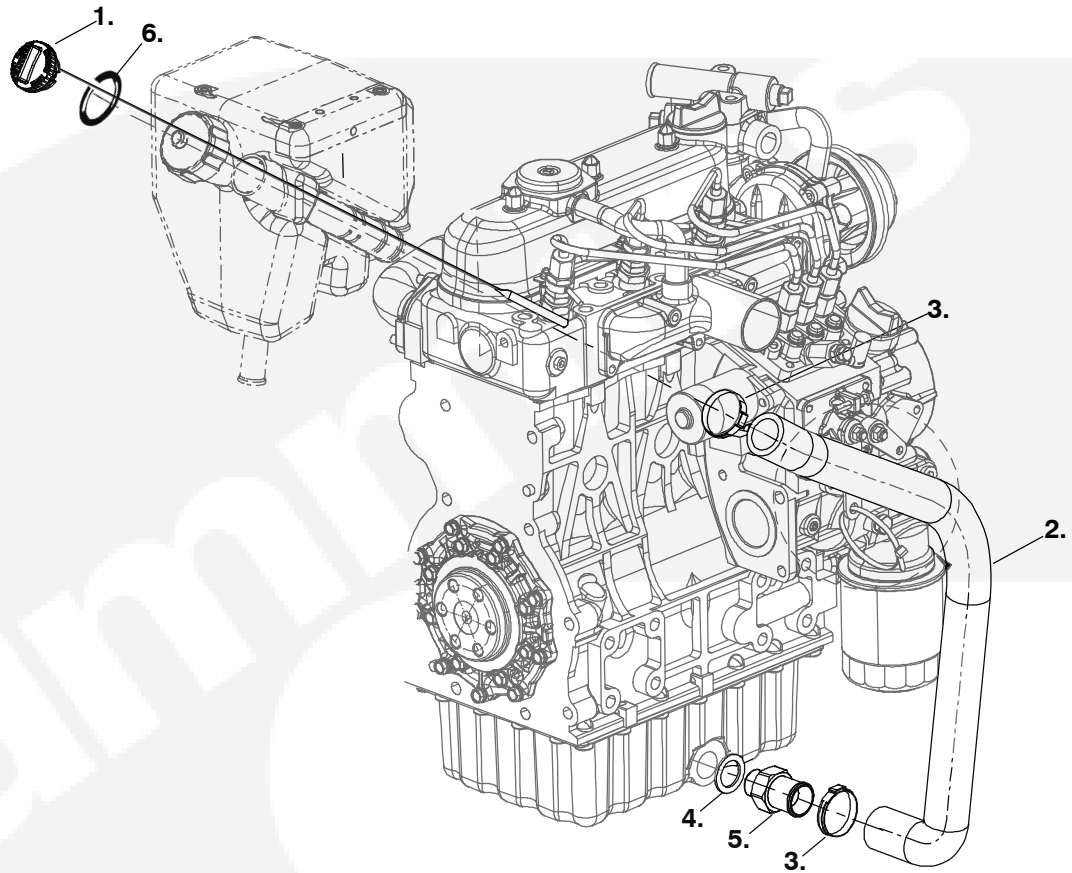


Engine Mounting



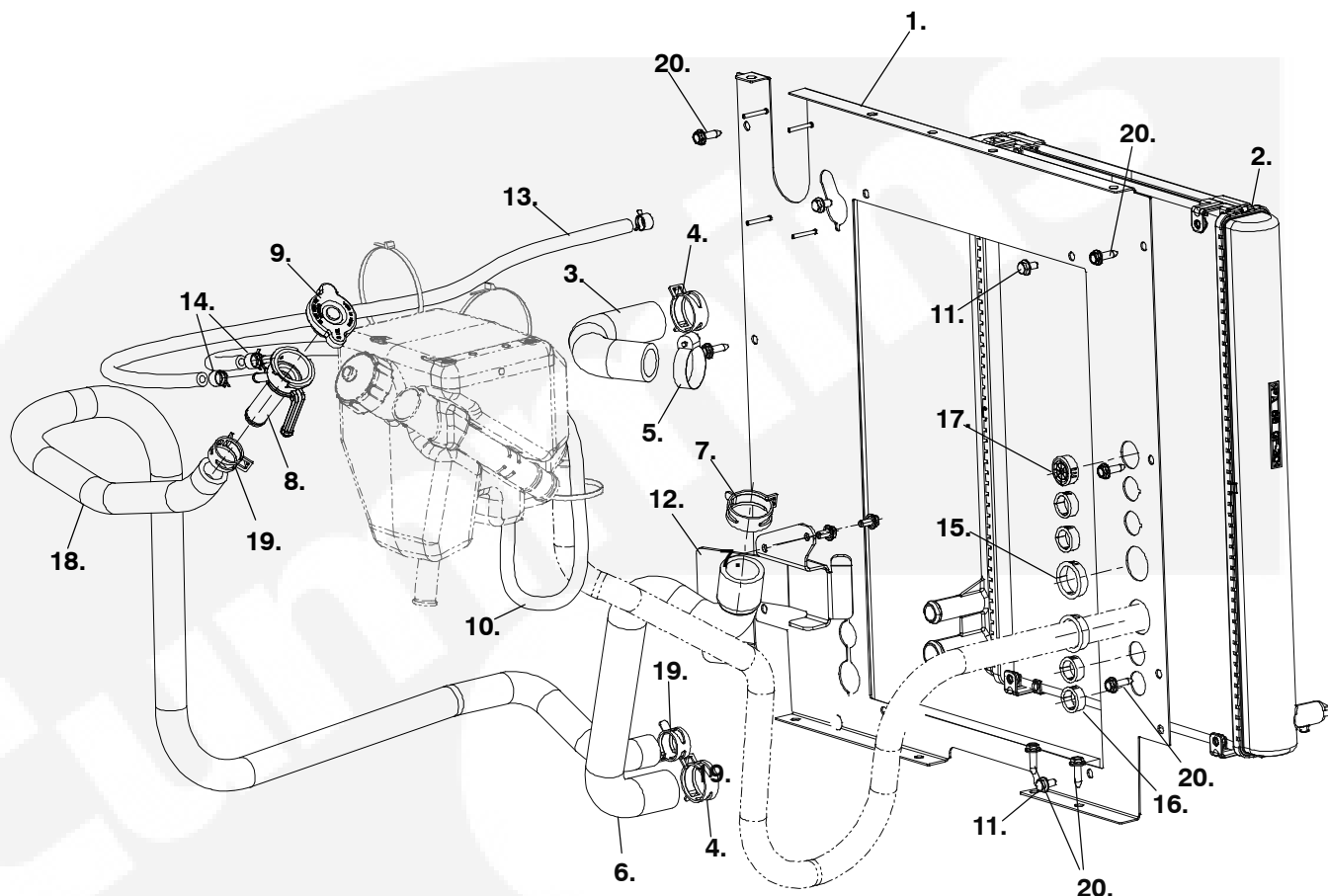
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	403-5372-02	1	Mounting, Engine (Front)	4.	526-0399-60	2	Washer, Flat (M8)
2.	815-0600	4	Screw, Hex Head Cap (M10 x 1.25 x 25mm)	5.	403-6775-02	1	Bracket, Engine Lifting
3.	800-2056	2	Screw, Hex Head Cap (M8 1.25 x 16mm)	6.	193-0318	1	Sender, Water Temp
				7.	526-2120	4	Washer, Flat (M10)

Oil Gauge



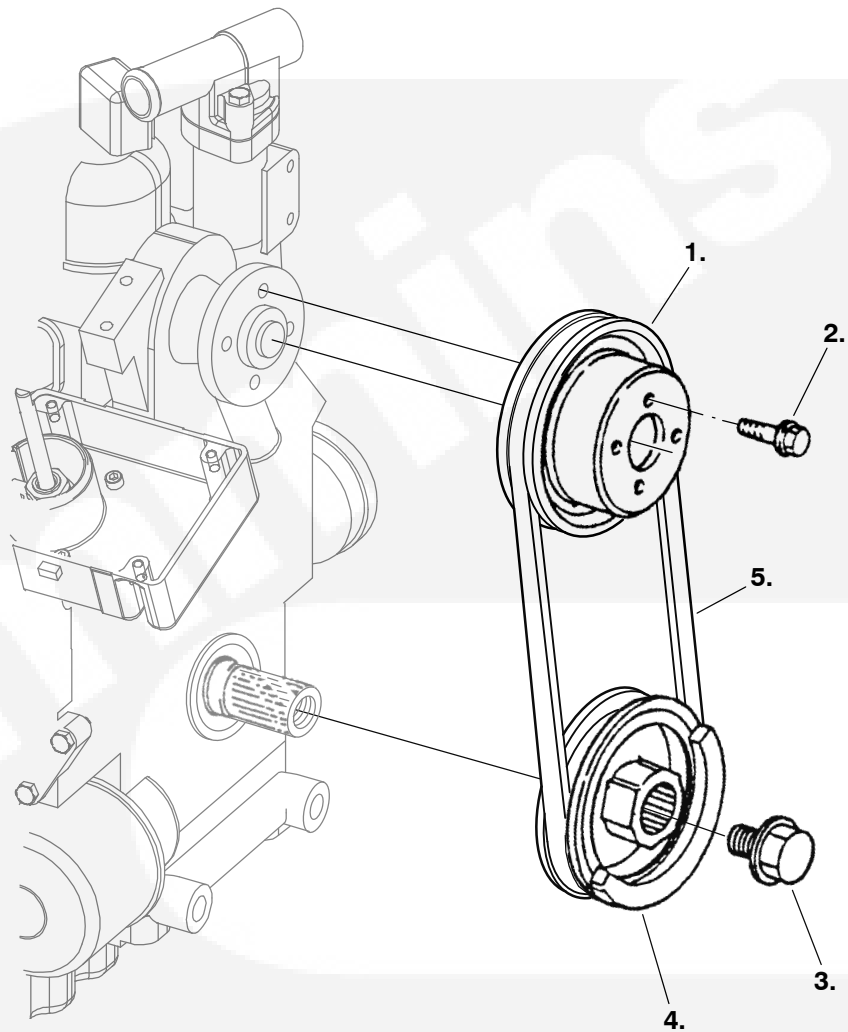
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	123-2348	1	Indicator, Oil Level	4.	509-0475	2	Washer, Sealing
2.	503-2847	1	Hose, Oil	5.	502-1586	1	Connector, Hose
3.	503-1951-46	2	Clamp, Hose	6.	509-0329	1	O'Ring

Cooling System



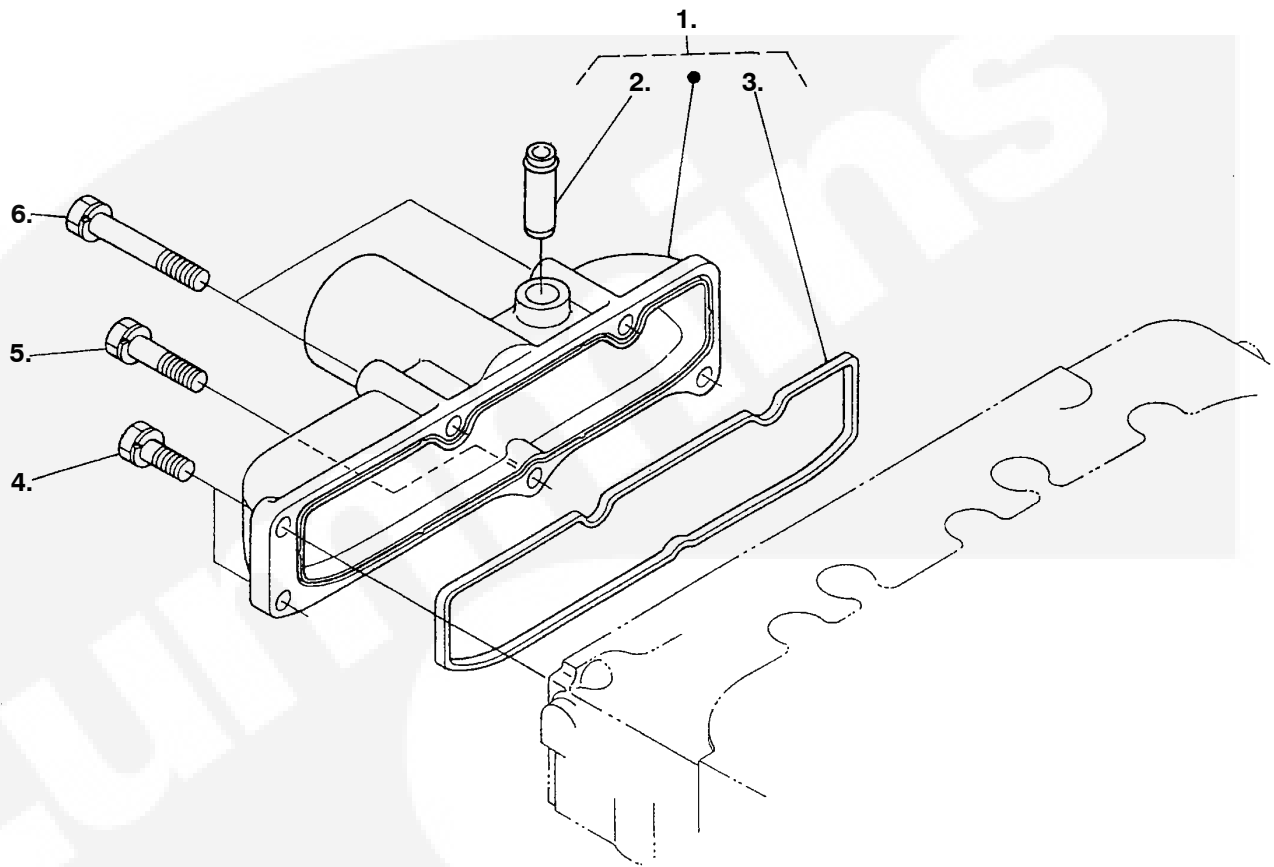
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	130-7415	1	Radiator, Air Baffle	13.	503-2604-02	1	Hose, Coolant
2.	130-6486	1	Radiator	14.	503-2822-01	4	Clamp, Hose
3.	503-2591	1	Hose, Radiator (Upper)	15.	508-1268-02	2	Bushing
4.	503-2816-03	2	Clamp, Hose	16.	508-1268-01	4	Bushing
5.	503-0189	1	Clamp, Hose	17.	508-1285-01	1	Bushing
6.	503-2592	1	Hose, Radiator (Lower)	18.	503-2869	1	Hose, Radiator
7.	503-2816-05	1	Clamp, Hose	19.	503-2816-02	2	Clamp, Hose
8.	130-4321	1	Neck Filler	20.	800-6399	10	Screw, Hex Head Flanged TF (M6 Locking)
9.	130-7902	1	Cap, Filler (16 PSI)				
10.	503-2604-01	1	Hose, Coolant				
11.	821-2096-02	6	Screw, Locking Flange (M6 x 1 x 12mm)				
12.	130-7948-02	1	Bracket, Hose				

Pulley



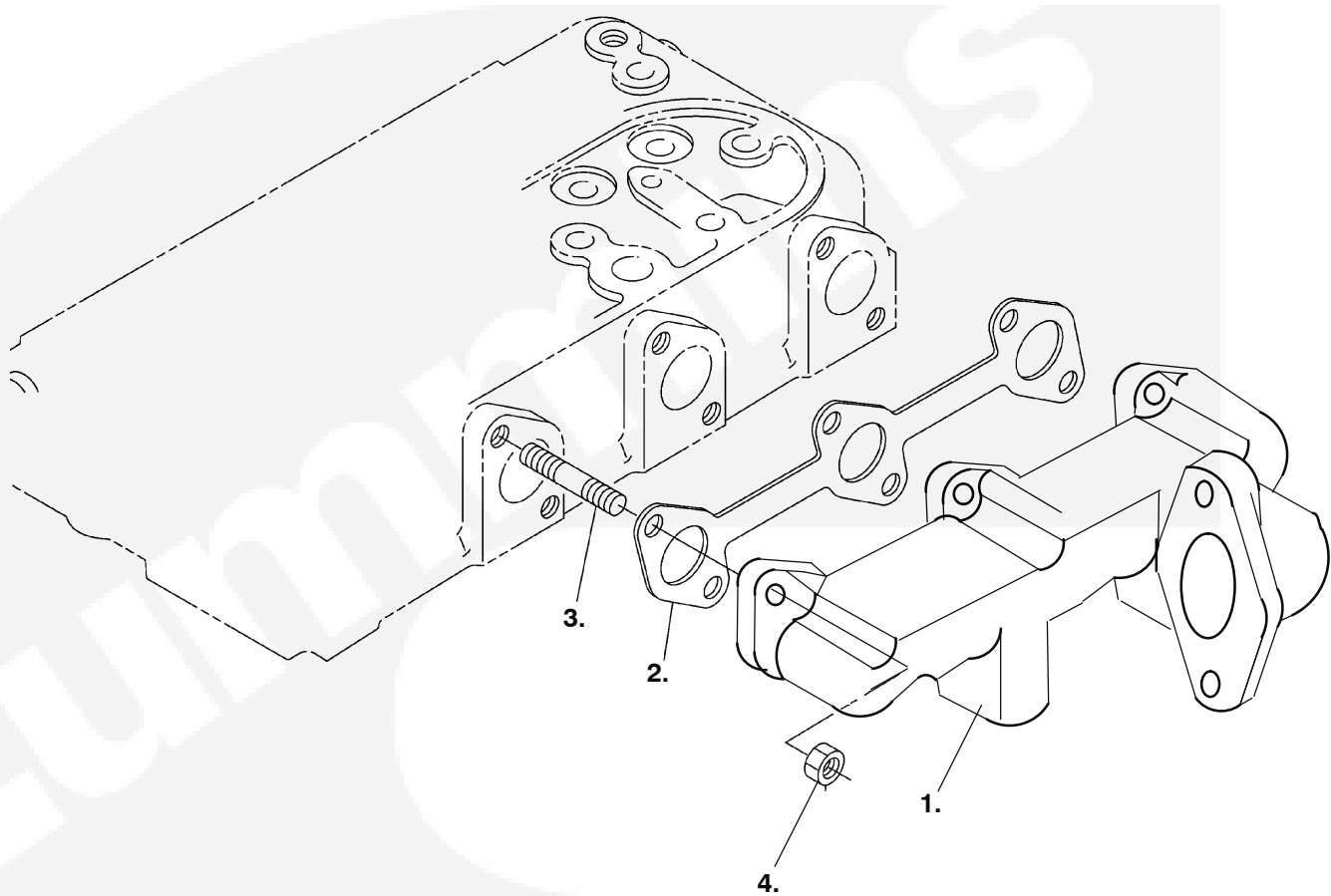
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	185-7438	1	Pulley, Water Pump	4.	185-6933	1	Pulley, Drive
2.	185-2572	4	Screw, Hex Head Flange	5.	511-0217	1	Belt, Drive
3.	185-6633	1	Screw, Hex Head Cap				

Inlet Manifold



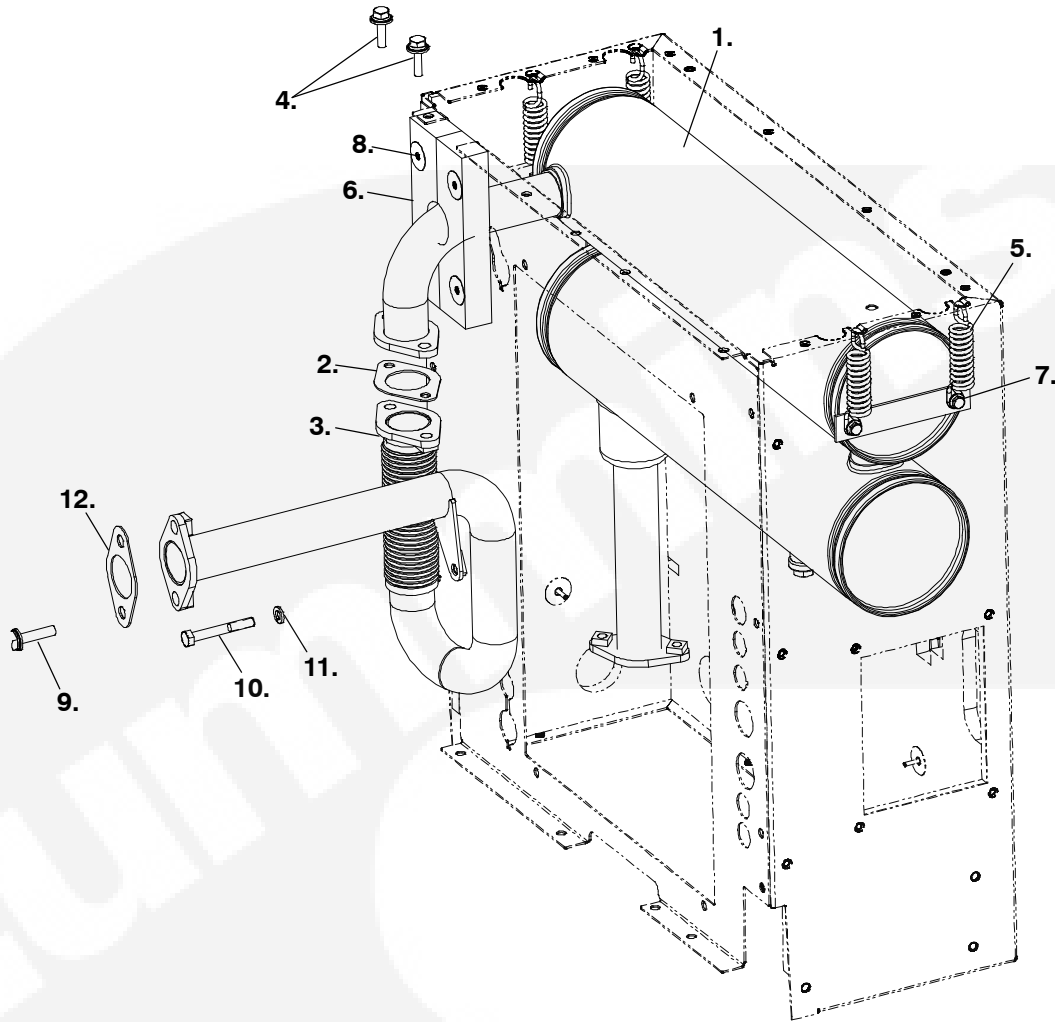
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	181-9189	1	Manifold Assy, Inlet (Includes Manifold and Gasket)	4.	185-2389	3	Bolt
2.	185-6499	1	Pipe, Breather	5.	185-6677	1	Bolt
3.	185-6926	1	Gasket, Manifold	6.	185-7069	2	Bolt

Exhaust Manifold



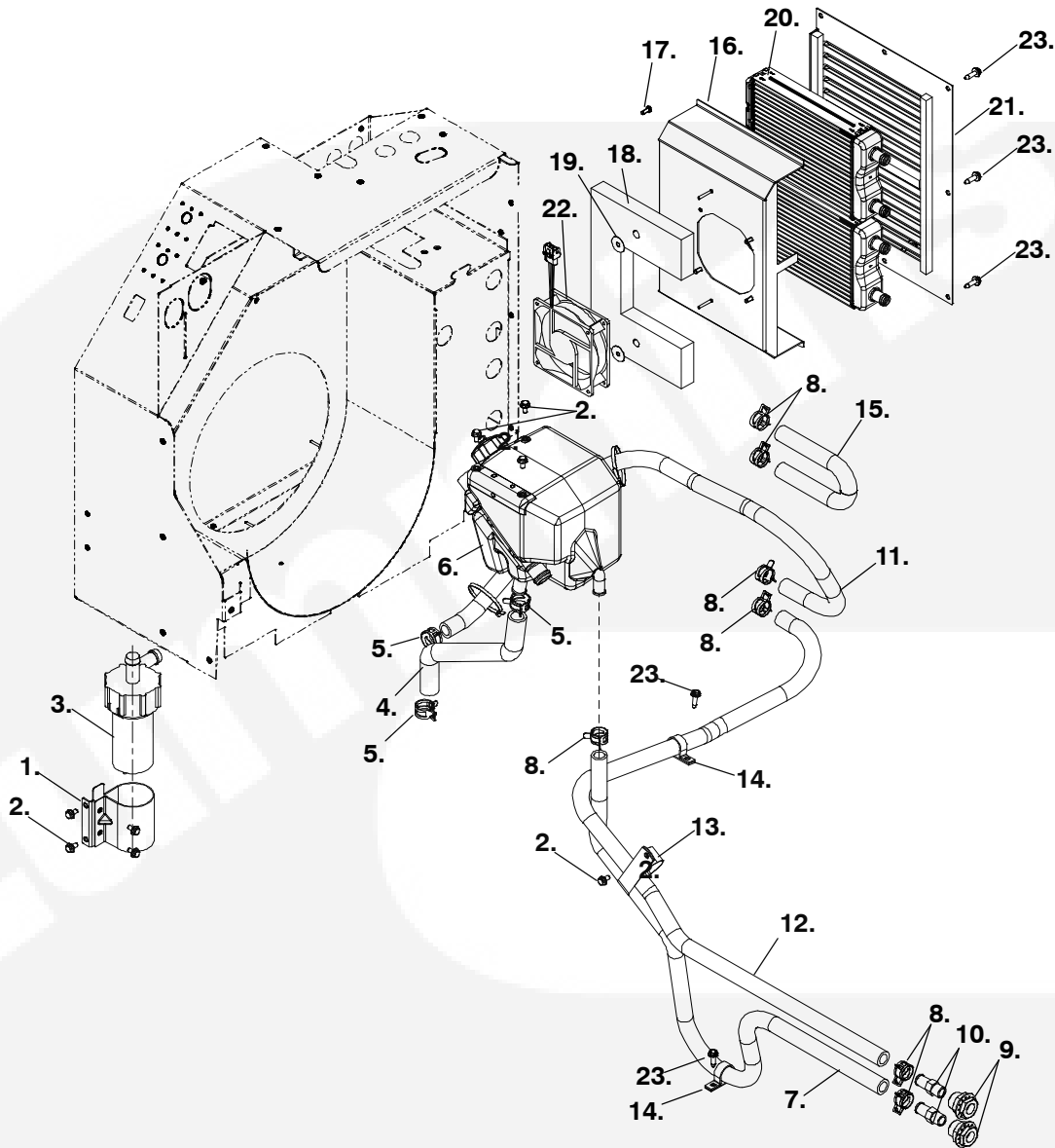
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	154-3263	1	Manifold Assy, Exhaust (Includes Manifold and Gasket)	3.	185-6698	6	Stud
2.	185-6925	1	Gasket, Exhaust Manifold	4.	185-6699	6	Bolt

Exhaust



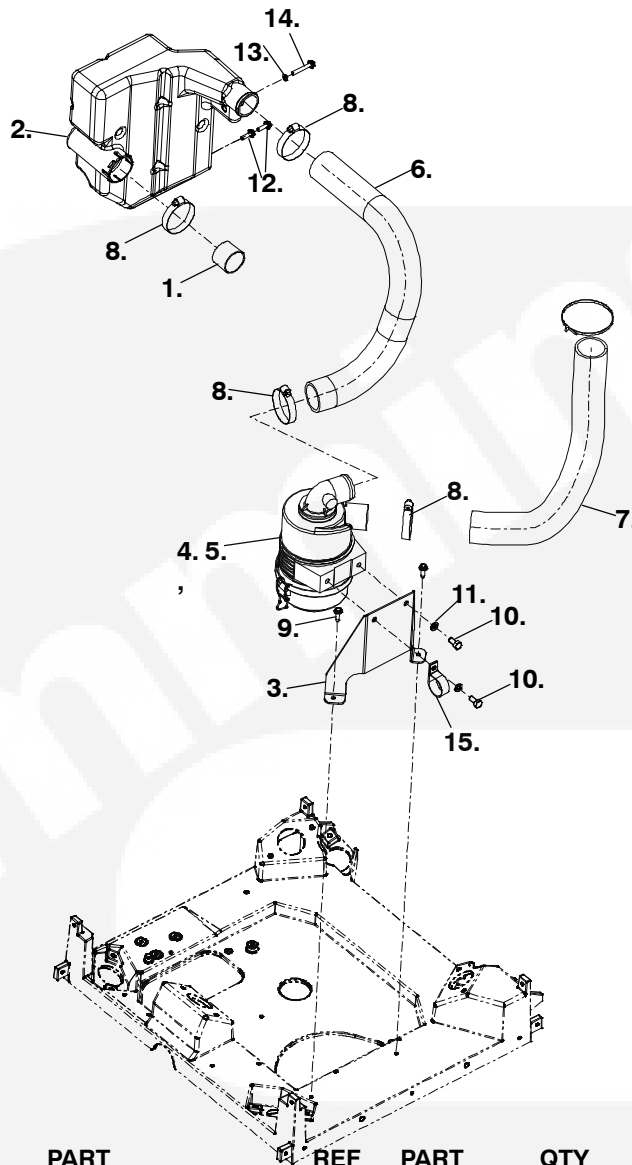
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	155-4739	1	Muffler	8.	518-0581	4	Nut, Push-On
2.	154-2800	1	Gasket, Exhaust Manifold	9.	821-6004-04	2	Screw, Hex Head Sems (M10 x 1.5 x 35mm)
3.	154-3249	1	Assy, Manifold	10.	800-2065	1	Screw, Hex Head Cap (M8 x 1.25 x 60mm)
4.	821-6003-03	2	Screw, Hex Head Sems (M8 x 1.25 x 25mm)	11.	850-2008	1	Washer, Locking Split (M8)
5.	506-0052	4	Spring, Extension	12.	-	1	Gasket, Exhaust Manifold (Included with Engine)
6.	155-4666	2	Insulation, Exhaust				
7.	821-2096-02	4	Screw, Locking Flange (M6 x 1.0 x 12mm)				

Heat Exchanger



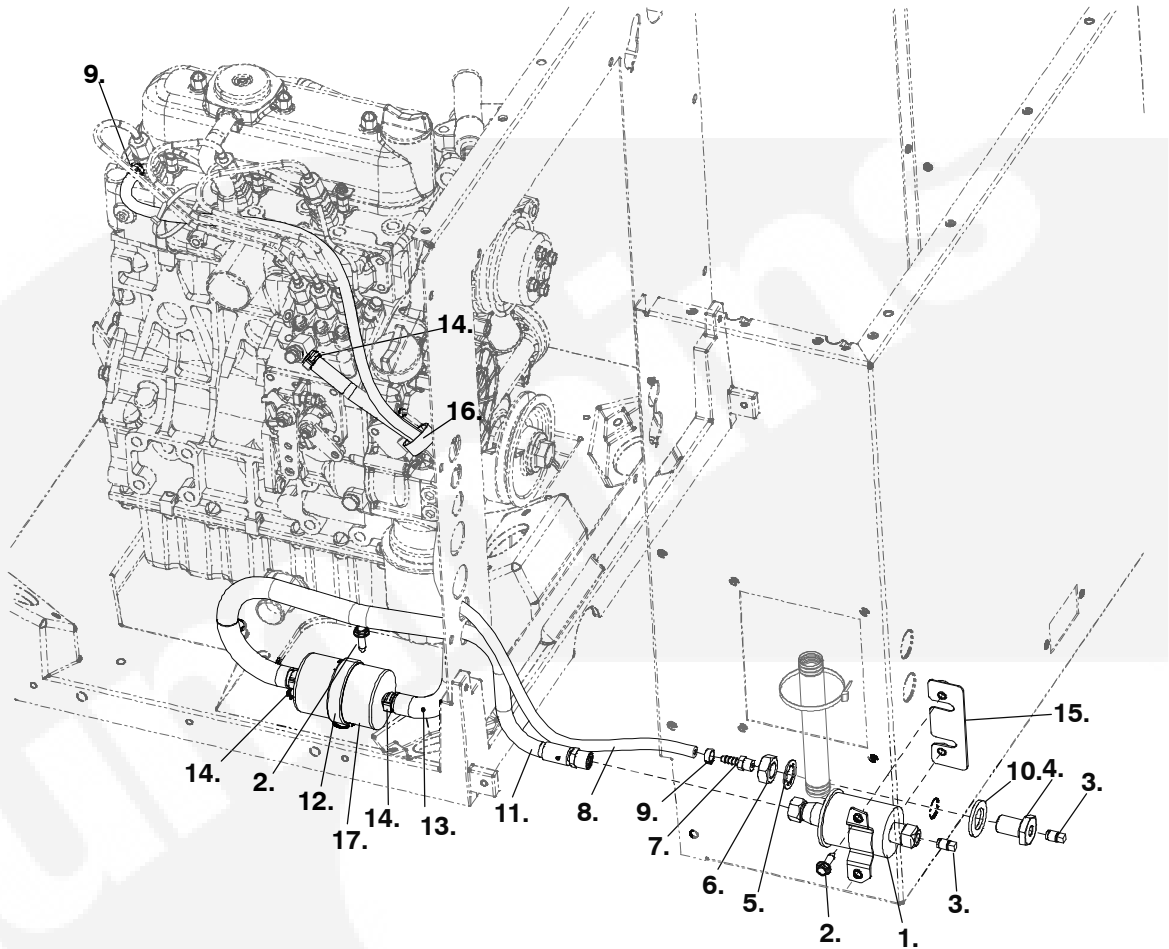
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	132-0480-02	1	Bracket, Water Pump	12.	503-2868	1	Hose, Coolant (Exchanger to Housing)
2.	821-2096-02	8	Screw, Locking Flange (M6 x 1 x 12mm)	13.	503-2836-01	1	Clamp, Hose
3.	132-0450	1	Pump, Water Cooling (Inverter)	14.	332-1553	2	Clamp, Loop
4.	503-2863	1	Hose, Coolant (Pump to Bottom)	15.	503-2866	1	Hose, Coolant
5.	503-2816-02	3	Clamp, Hose	16.	130-7701-02	1	Bracket, Heat Exchange
6.	130-6863	1	Tank, Coolant	17.	819-1167-01	4	Screw, Pan Head Torx (#10-14 x .50 ")
7.	503-2864	1	Hose, Coolant (Inverter)	18.	404-0180	1	Insulation, Baffle
8.	503-2816-01	7	Clamp, Hose	19.	518-0581	2	Nut, Push On
9.	502-1209	2	Coupling, Union	20.	130-7062	2	Exchange, Heat
10.	502-1561	2	Connector, Hose	21.	130-7380	1	Cover, Heat Exchange
11.	503-2867	1	Hose, Coolant (Pump to Exchanger)	22.	205-0351	1	Fan, Heat Exchanger
				23.	800-6399	9	Screw, Hex Flanged Head (M6)

Air Intake



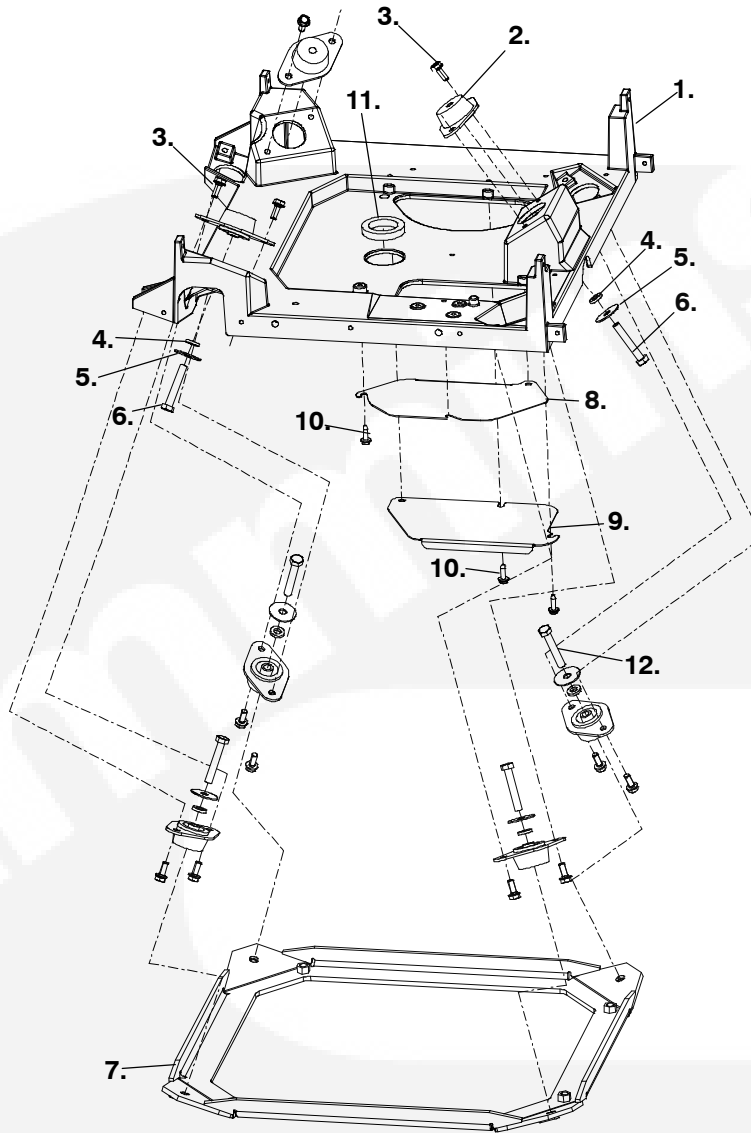
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	140-2898	1	Sleeve, Air Intake	9.	800-6399	2	Screw, Hex Flange Head (M6 Locking Head Blunt Point)
2.	140-4138	1	Resonator, Air Intake	10.	800-2056	2	Screw, Hex Head Cap (M8 x 1.25 x 16mm)
3.	140-4173-02	1	Bracket, Air Cleaner	11.	850-2008	2	Washer, Locking Split (M8)
4.	140-4048	1	Assy, Air Cleaner (Includes Parts Marked*)	12.	821-2096-04	2	Screw, Locking Flange (M6 x 1 x 20mm)
	140-3072	*	Cover	13.	850-2006	1	Washer, Locking Split (M6)
	504-0298	*	Valve (Not Shown)	14.	821-2038	1	Screw, Locking Flange (M6 x 1 x 40mm)
5.	140-3071	1	*Filter, Air (Not Shown)	15.	518-0548-05	1	Clamp, Hose (Insulated 15.8 Dia)
6.	503-2999	1	Hose, Intake				
7.	503-2054-03	1	Hose				
8.	503-0365	4	Clamp, Hose				

Fuel System



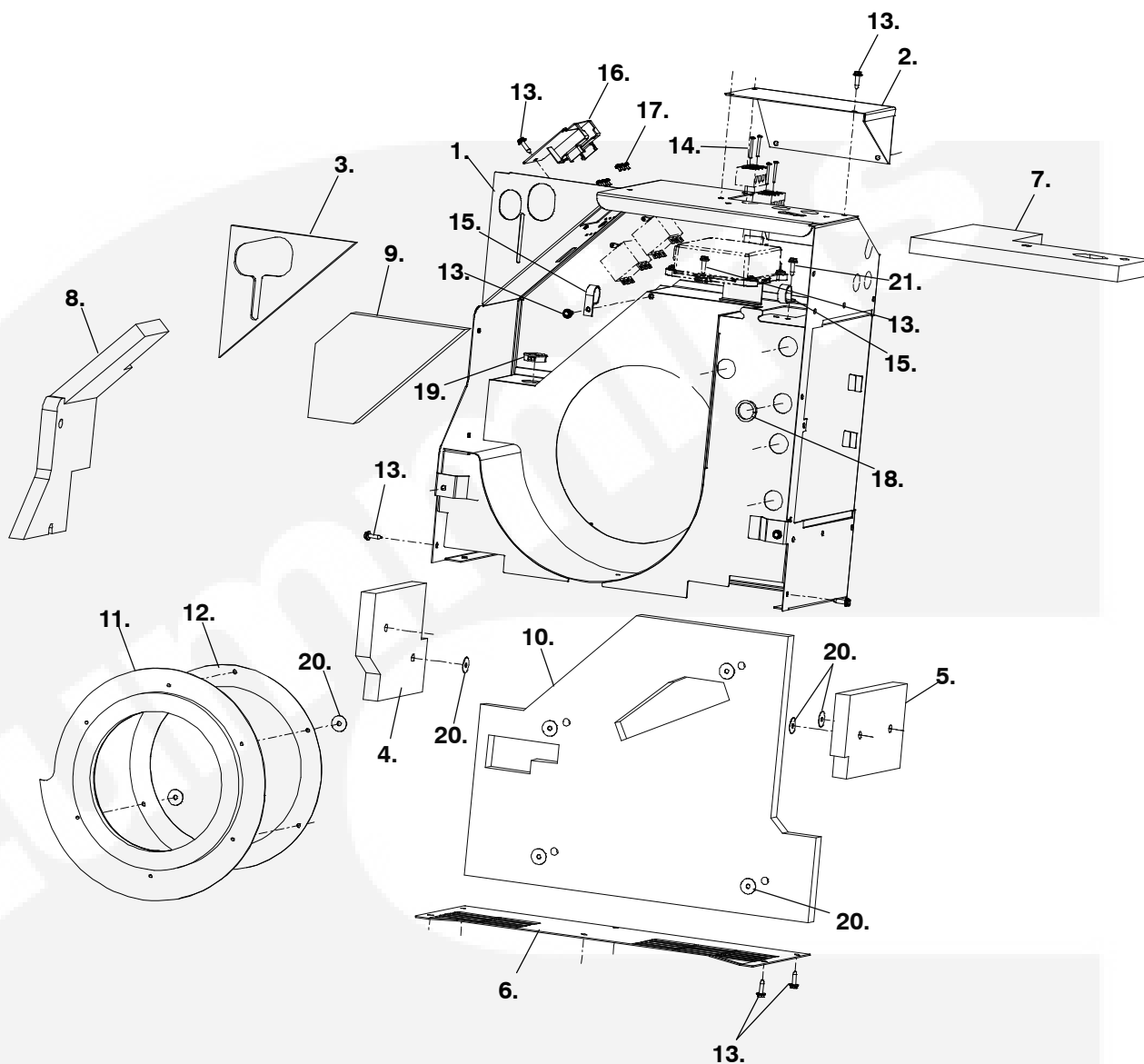
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	541-1442	1	Kit Filter, Fuel (Includes Clamps and Filter)	9.	503-1952-06	2	Clamp, Hose
1.	149-2790	1	Pump, Fuel	10.	526-0399-68	1	Washer, Flat (M18)
2.	800-6399	3	Screw, Hex Flg Head (M6 Locking Head)	11.	501-1037	1	Hose, Fuel (Fuel Pump to Fuel Filter)
3.	517-0273	2	Plug, Pipe	12.	518-0548-61	1	Clamp, Hose
4.	502-1296-02	1	BulkHead, Fitting	13.	501-1038	1	Hose, Fuel (Fuel Filter to Injection Pump)
5.	854-0028	1	Washer IT Locking (5/8ID)	14.	503-1951-13	3	Clamp, Hose
6.	868-0007	1	Nut Hex Jam (5/8-18UNF)	15.	149-2782-02	1	Bracket, Fuel Pump
7.	502-1299	1	Connector, Hose (1/8NPT x 3/16 Hose)	16.	332-1553	1	Clamp, Loop (Insulated)
8.	503-2894	1	Hose, Fuel (Fuel, Return)	17.	147-0860	1	Filter, Fuel (Sold in Kit Only)

Mounting



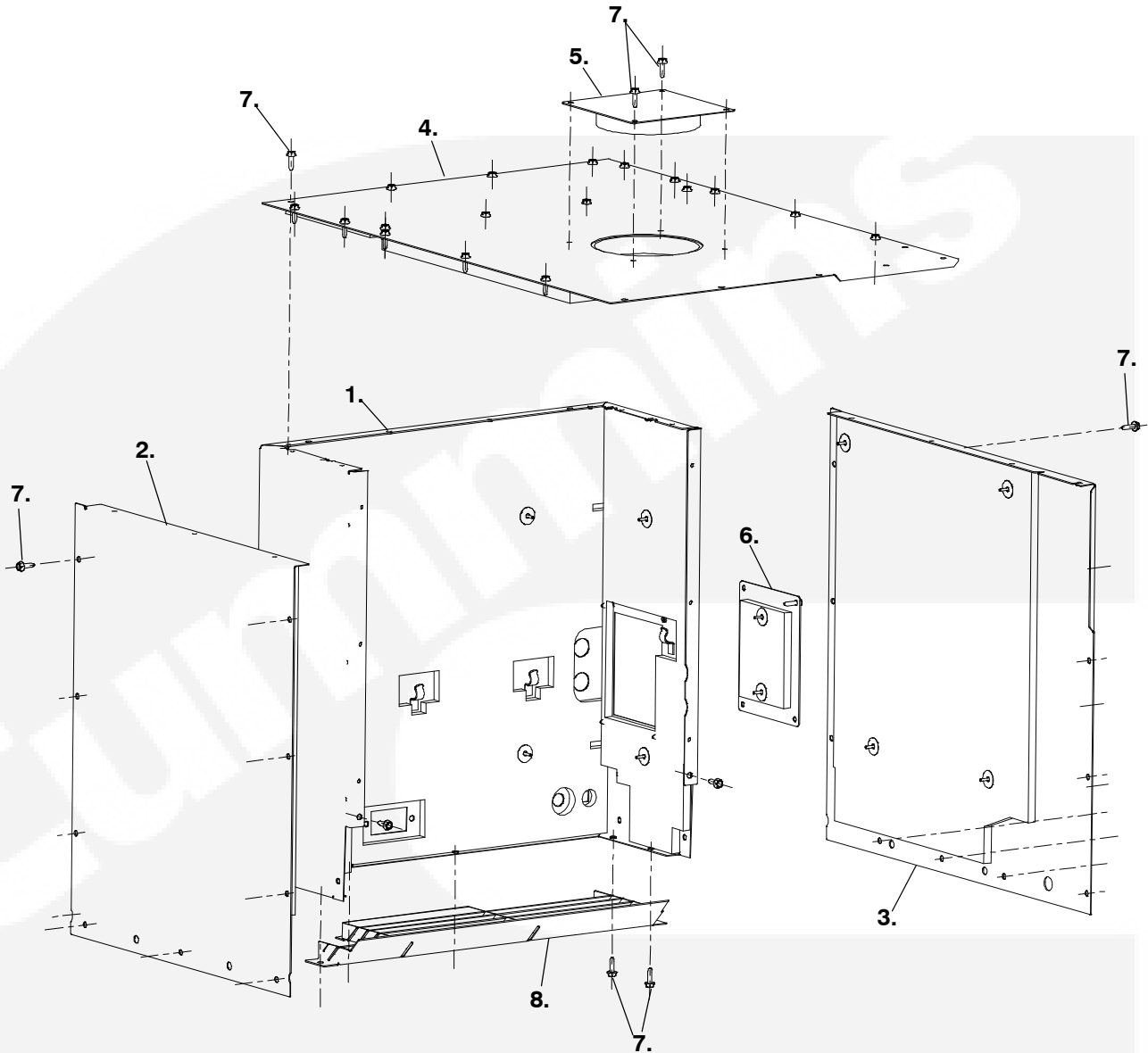
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	403-6693	1	Base, Skid	8.	404-0211-02	1	Door, Access
2.	402-0728-01	7	Isolator, Vibration	9.	404-0212-02	1	Door, Access
3.	815-0829-06	14	Screw, Thread Form (M8 x 1.25 x 20mm)	10.	800-6399	6	Screw, Hex Flanged Head (M6 Blunt Point)
4.	526-0174	7	Washer, Flat (10GA)	11.	403-3859	1	Seal, Oil Drain
5.	526-0124	7	Washer, Flat (3/8")	12.	800-2091	4	Screw, Hex Head Cap (M10 x 1.5 x 50mm)
6.	800-2093	7	Screw, Hex Head (M10 x 1.5 x 60mm)				
7.	403-6722-02	1	Pan, Base				

Control Enclosure



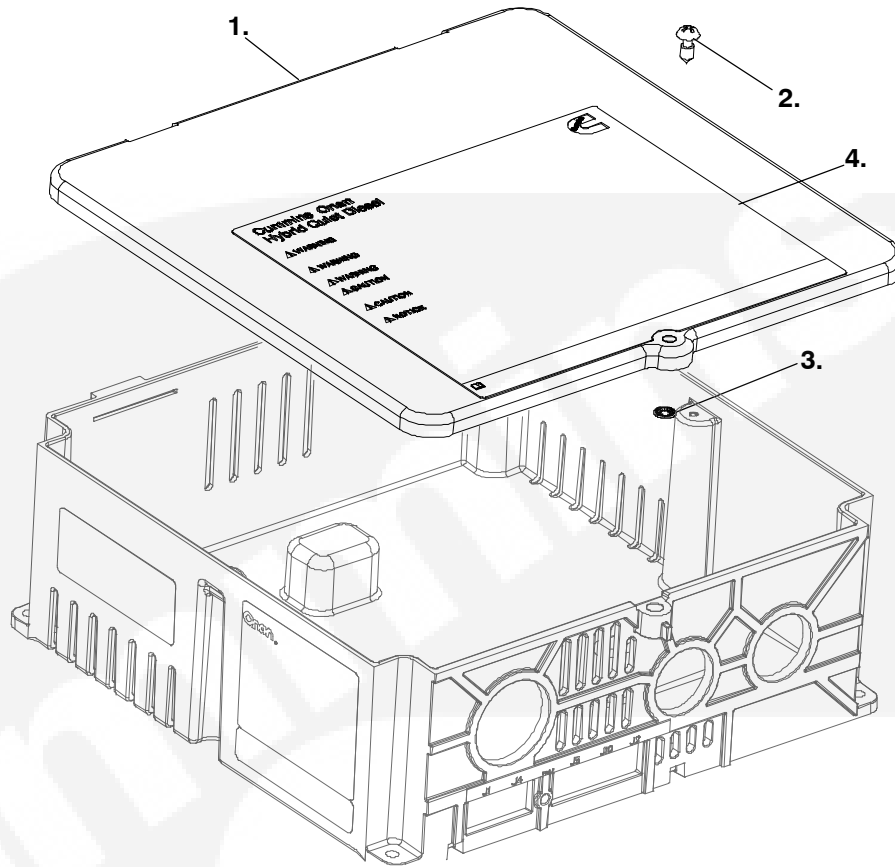
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	404-0169-02	1	Panel, End Cap	13.	800-6399	18	Screw, hex Flange Head TF (M6 Locking Head Type CA Blunt Point)
2.	319-6829-02	1	Cover, Terminal	14.	812-0070	4	Screw, Round Head Slot (6-32 x 1.25")
3.	404-0167	1	Insulation, Enclosure	15.	332-1553	2	Clamp, Loop (insulated)
4.	404-0181	1	Insulation, Baffle	16.	405-5309-03	1	Cover, Access
5.	404-0182	1	Insulation, Baffle	17.	815-0549-01	12	Screw, XREC Ph ET (6-32 x .375")
6.	404-0183-02	1	Panel, End Cap	18.	508-1268-02	5	Bushing
7.	404-0184	1	Insulation, Baffle	19.	508-1268-03	1	Bushing
8.	404-0185	1	Insulation, Baffle	20.	518-0581	14	Nut, Push On
9.	404-0186	1	Insulation, Enclosure	21.	821-2096-02	2	Screw, Locking Flange (M6 x 1 x 12mm)
10.	404-0187	1	Insulation, Baffle				
11.	404-0123	1	Insulation, Baffle				
12.	404-0208-02	1	Insulation, Cover				

Enclosure



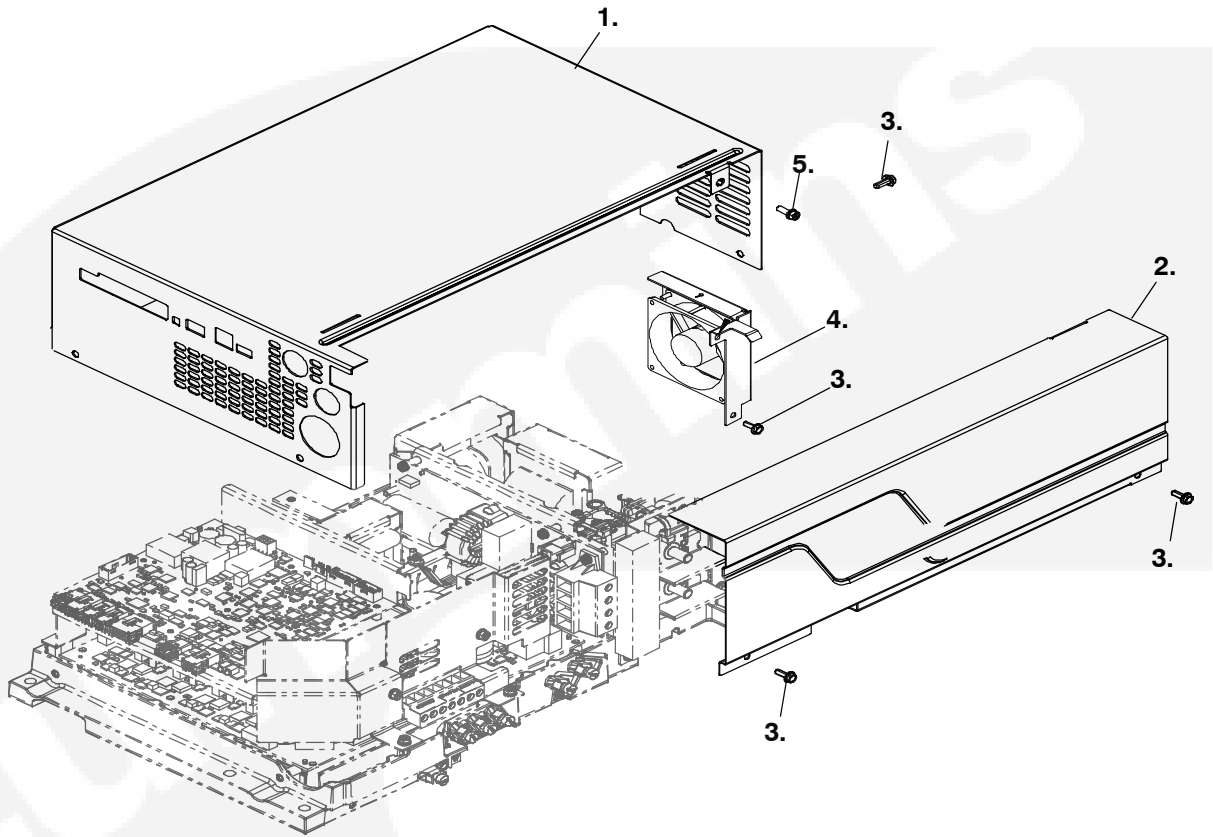
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	319-5825	1	Panel, (Radiator End Cap)	6.	404-0076	1	Cover, Access
2.	319-5824	1	Panel, (Rear)	7.	800-6399	53	Screw, Hex Head Flange (M6 Locking Head Type CA Blunt Point)
3.	319-5826	1	Panel (Front)	8.	234-1070-02	1	Louver, Exhaust
4.	319-5827	1	Panel (Top)				
5.	405-9326	1	Cover, Access				

Transfer Switch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	319-6173	1	Cover, Transfer Switch(Includes Screws, Retainer and Warning Label)	4.	98-8725	1	Label, Warning (Transfer Switch)
2.	812-1159	1	Screw, Round Head XREC (M4 x .7 x 19mm)	* - Transfer Switch Replacement Assembly 541-1561			
3.	406-1207	1	Washer, Retainer (14-20)				

Inverter Components



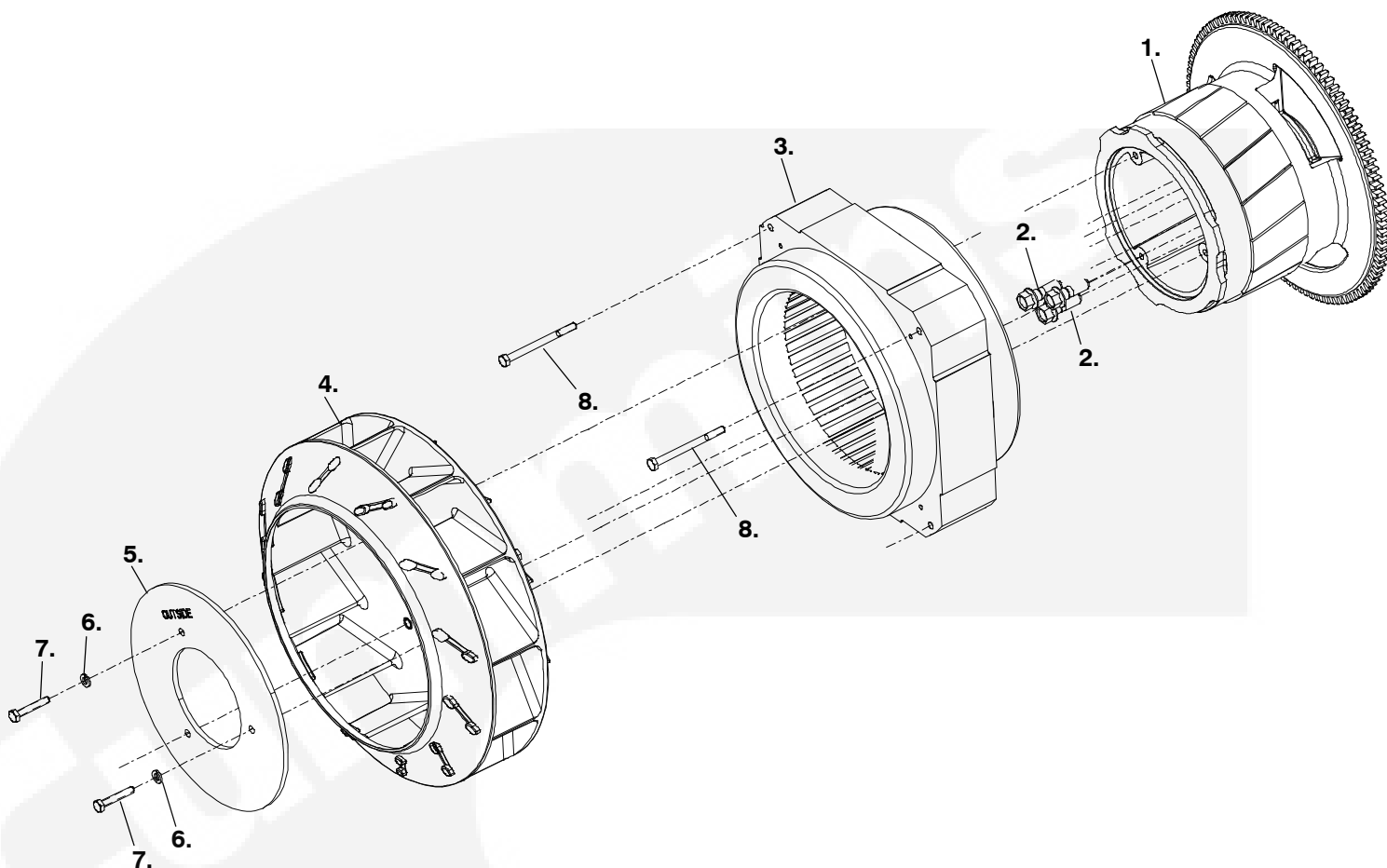
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	404-0873	1	Cover, Enclosure
2.	404-0874	1	Cover, Enclosure (Side)
3.	800-6383-02	6	Screw, Hex Head Flange (M5)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4.	205-0339	1	Fan, Inverter
5.	815-1556-05	2	Screw, Hex Head Flange (M5)

* – Inverter Replacement Assembly
 New – 541-1562-02
 Reconditioned – 541-1562-96

NOTE: Order 1 for Primary, 1 for Secondary, or 2 for both.

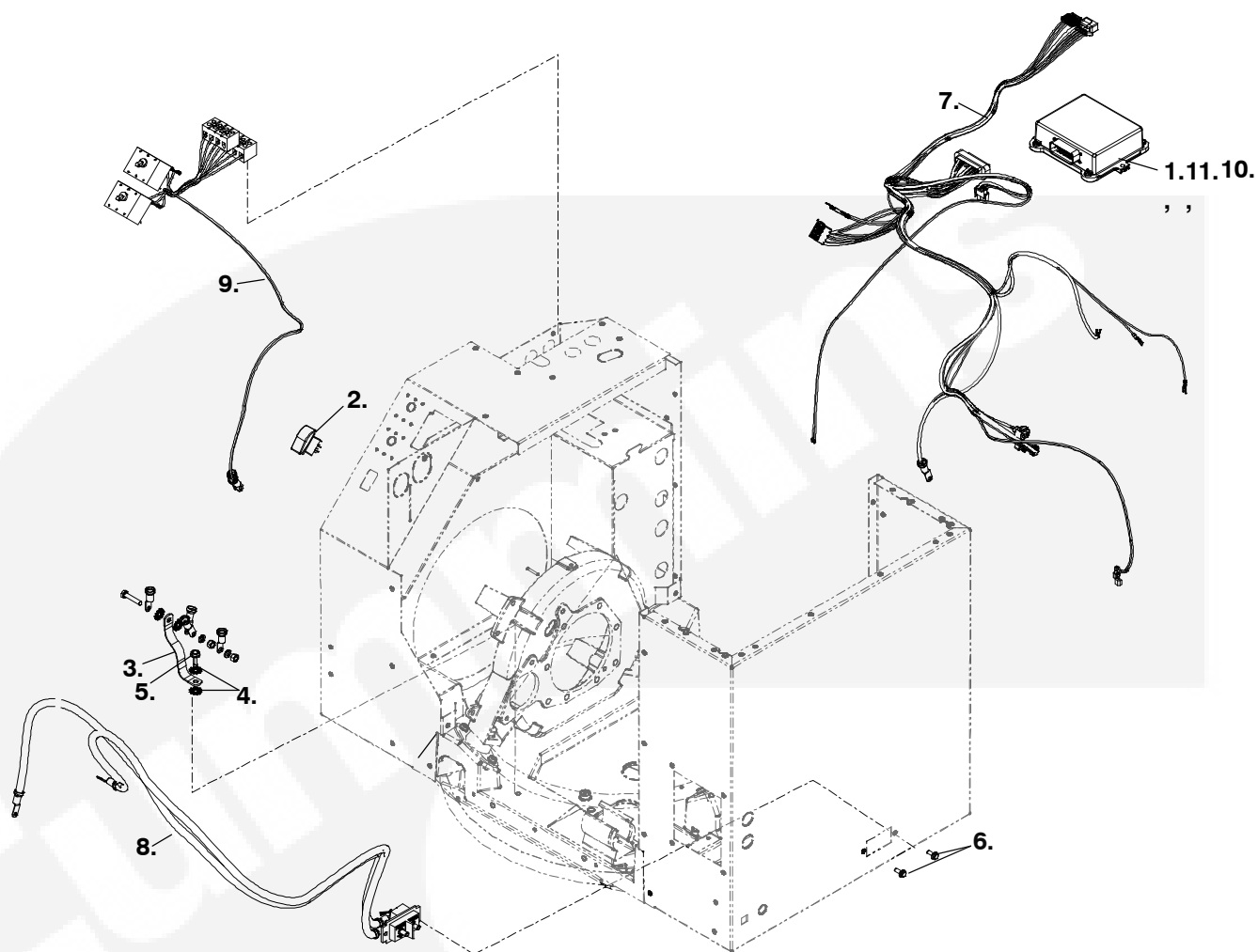
Generator



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	201-3624	1	Assy, Rotor
2.	185-5477	6	Bolt, Flywheel
3.	220-4645	1	Stator, Wound
4.	205-0354	1	Assy, Fan (Generator)
5.	130-7687-02	1	Plate, Support
6.	850-2006	3	Washer, Locking Split
7.	800-2038	3	Screw, Hex Head (M6 x 1 x 40)
8.	800-2045	4	Screw, Hex Head Cap (M6 x 1 x 75)

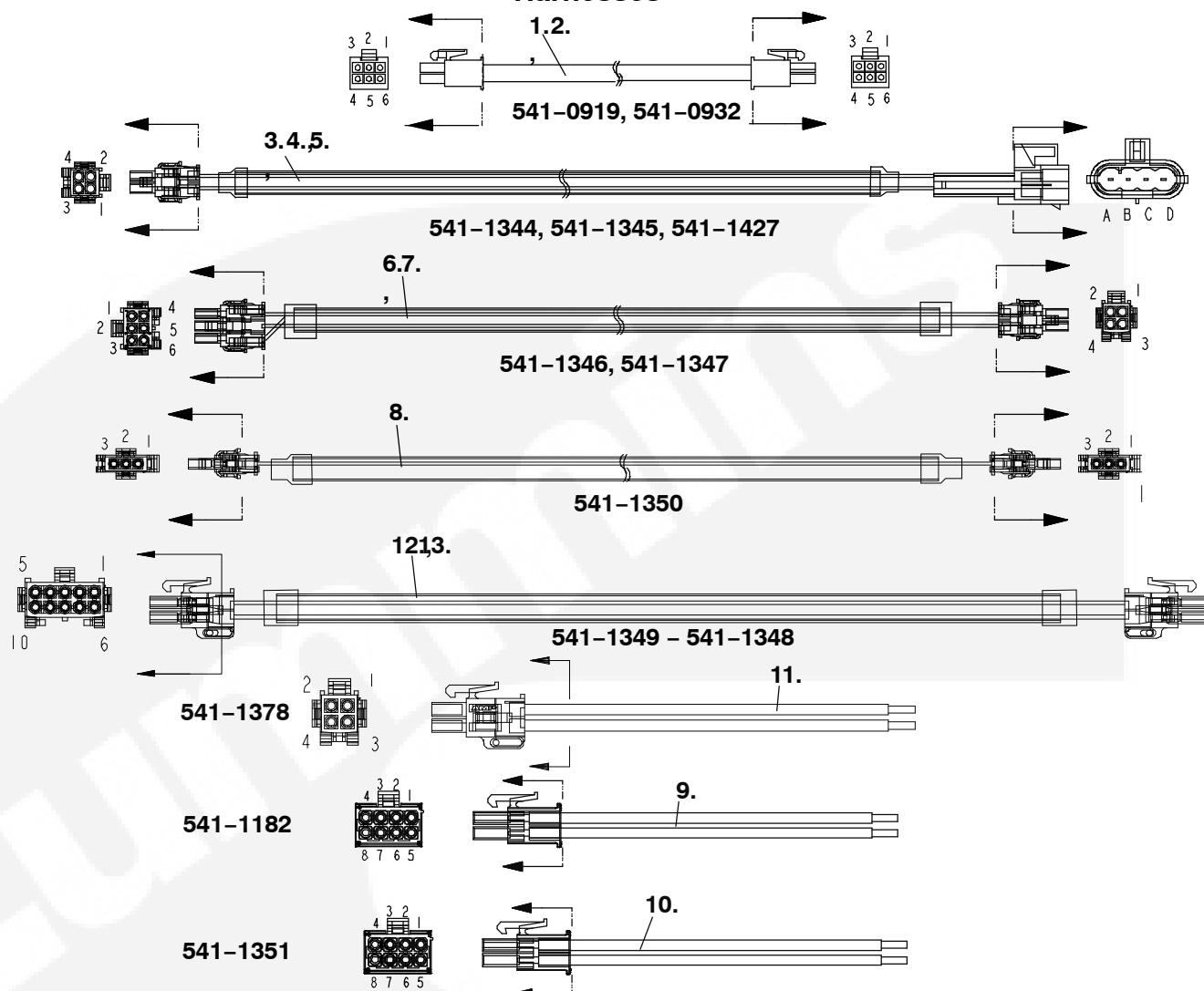


Harnesses



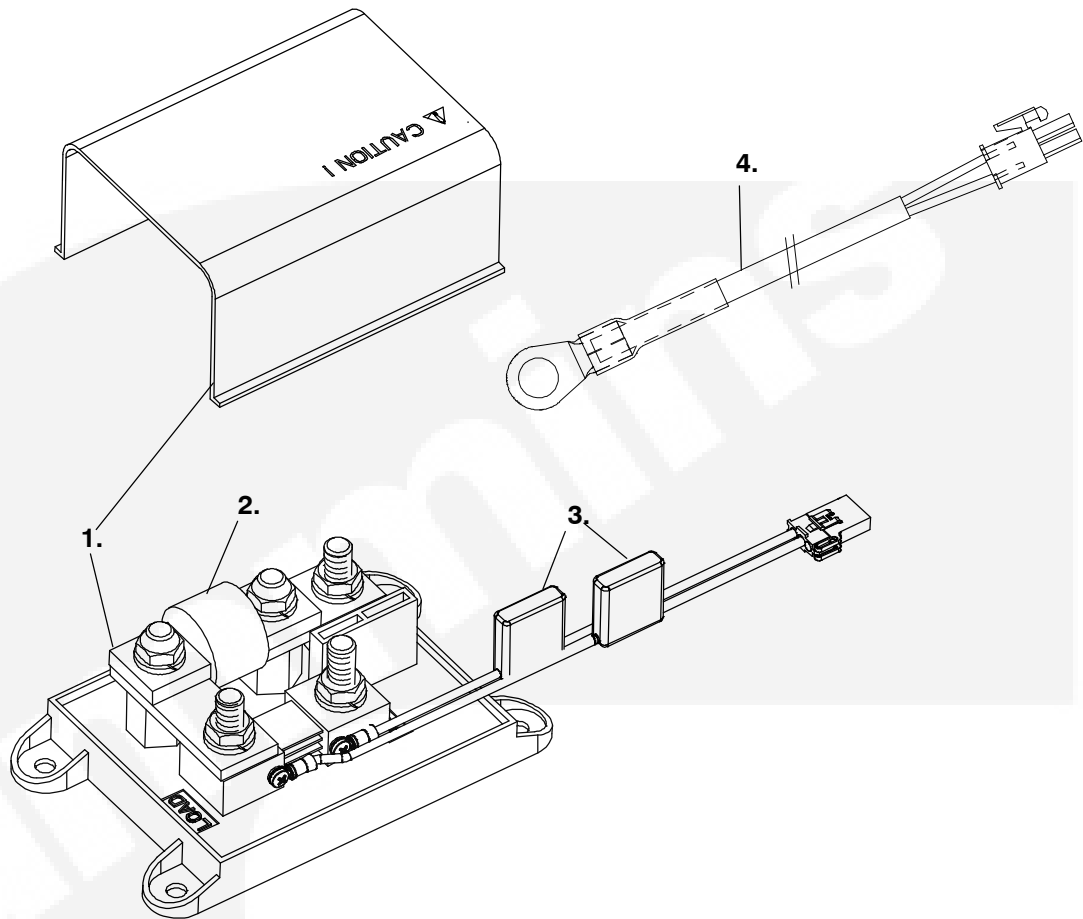
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	300-6415	1	PCB (ECM)	8.	338-4935	1	Harness, Battery
2.	308-1038	1	Switch, Rocker	9.	338-4936	1	Harness, AC
3.	337-3467	1	Strap, Bond	10.	321-0307-08	2	*Fuse, 25 Amp 32V (Not Shown) (F1 – Glow Plug, F2 – Starter)
4.	856-0008	4	Washer, ETIT Locking (5/16)	11.	321-0321-05	1	*Fuse, 7.5 Amp 32V (Not Shown) (F3 – Coolant Pump)
5.	815-0829-06	1	Screw, Hex Thread Form (M8 x 1.25 x 20mm)				
6.	821-2096-03	2	Screw, Locking Flange (M6 x 1 x 16mm)				
7.	338-5042	1	Harness, Engine				

Harnesses



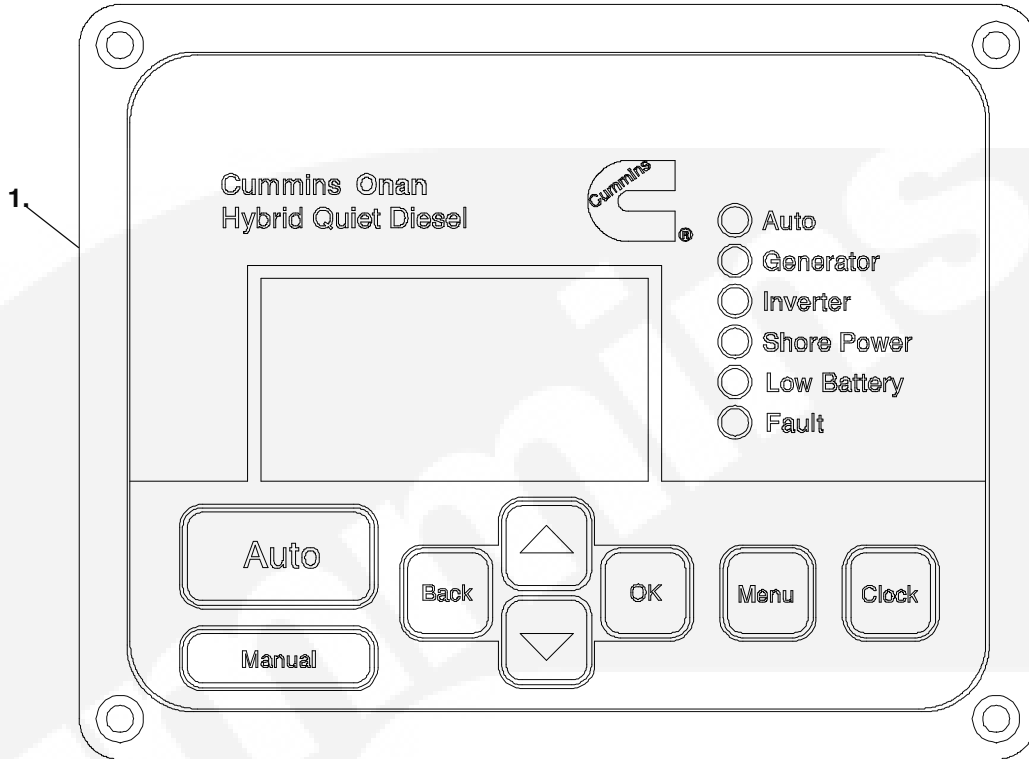
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	541-0919	1	Kit, Remote Display Harness (25')	8.	541-1350	1	Kit, Control Harness (Battery Shunt 15')
	338-4280	1	Harness, (25')		338-5022	1	Harness, Control (15')
2.	541-0932	1	Kit, Remote Display Harness (50')	9.	541-1182	1	Kit, Accessory Harness (Ext Wake)
	338-4281	1	Harness, Accessory (50')		338-4557	1	Harness, Accessory
3.	541-1344	1	Kit, Power Unit Harness (30')	10.	541-1351	1	Kit, Control Harness (Transfer Switch Load Demand)
	338-5033	1	Harness, Control (30')		338-4853	1	Harness, Control
4.	541-1345	1	Kit, Power Unit Harness (50')	11.	541-1378	1	Kit, Remote Harness
	338-5034	1	Harness, Control (50')		338-4876	1	Harness, Control
5.	541-1427	1	Kit, Power Unit Harness (60')	12.	541-1349	1	Kit, Secondary Inverter Cable 3'
	338-5035	1	Harness, Control (60')		338-5040	1	Harness, Control 3'
6.	541-1346	1	Kit, Transfer Switch Harness (15')	13.	541-1348	1	Kit, Secondary Inverter Cable
	338-5036	1	Harness, Control (30')		338-5039	1	Harness, Control 15'
7.	541-1347	1	Kit, Transfer Switch Harness (30')				
	338-5037	1	Harness, Control (30')				

Battery Shunt



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	541-1330	1	Kit, Shunt (Parts Included Marked*)
	321-0443	1	*Block, Fuse (500Amp)
		1	*Instructions Included
2.	321-0390-03	1	*Fuse (400 Amp)
3.	321-0321-01	2	*Fuse (2 Amp LittleFuse #297002)
4.	193-0530	1	*Sensor, Temperature (Battery)

Remote Display



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	541-1333	1	Kit, Remote Display
	300-6078	1	Assy, Control (HQDSB)
			Instructions Included

Labels

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1.	98-5926	1	Label, Barcode
2.	98-7939-02	1	Label, Blank
3.	98-8644	1	Label, Package
4.	98-8691	1	Label, Information
5.	98-8464	1	Label, Warning
6.	98-8469	1	Label, Information
7.	98-8728	1	Label, Logo
8.	98-8718	1	Label, Logo
9.	98-8720	1	Label, Logo
10.	98-8846	1	Label, Warning (Stator)
11.	98-8847	1	Label, Warning (AGS)
12.	98-5926	1	Label, Barcode
13.	98-8111	1	Label, Information (Programing)
14.	98-5926	1	Label, Barcode
15.	98-8878-05	1	Label, Emissions

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Cummins **Onan**

Cummins Power Generation

1400 73rd Ave. NE
Minneapolis, MN 55432 USA

Phone 1 763 574 5000

Toll-free 1 800 888 6626

Fax 1 763 574 5298

Email www.cumminsonan.com/contact
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