

Cummins **Onan**



Parts Manual

Marine Generator Set

MDKBL (Spec A–G)

MDKBM (Spec A–G)

MDKBN (Spec A–G)

Introduction

This catalog applies to the standard marine generator sets listed below. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Parts illustrations are typical. Unless otherwise mentioned in the description or page heading, parts are interchangeable between models. Throughout this catalog left and right sides are determined by facing the engine end (front) of the set.

Generator Set Data Table

Model and Specification	Electrical Data					Battery Voltage
	Watts	Volts	Hertz	Wire	Phase	
7MDKBL*	7,000	#	50	2,3	1	#
9MDKBL*	9,000	#	60	2,3	1	#
9.5MDKBM*	9,500	#	50	2,3	1	#
11.5MDKBM*	11,500	#	60	2,3	1	#
11MDKBN*	11,000	#	60	2,3	1	#
13.5MDKBN*	13,500	#	50	2,3	1	#

* – 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.



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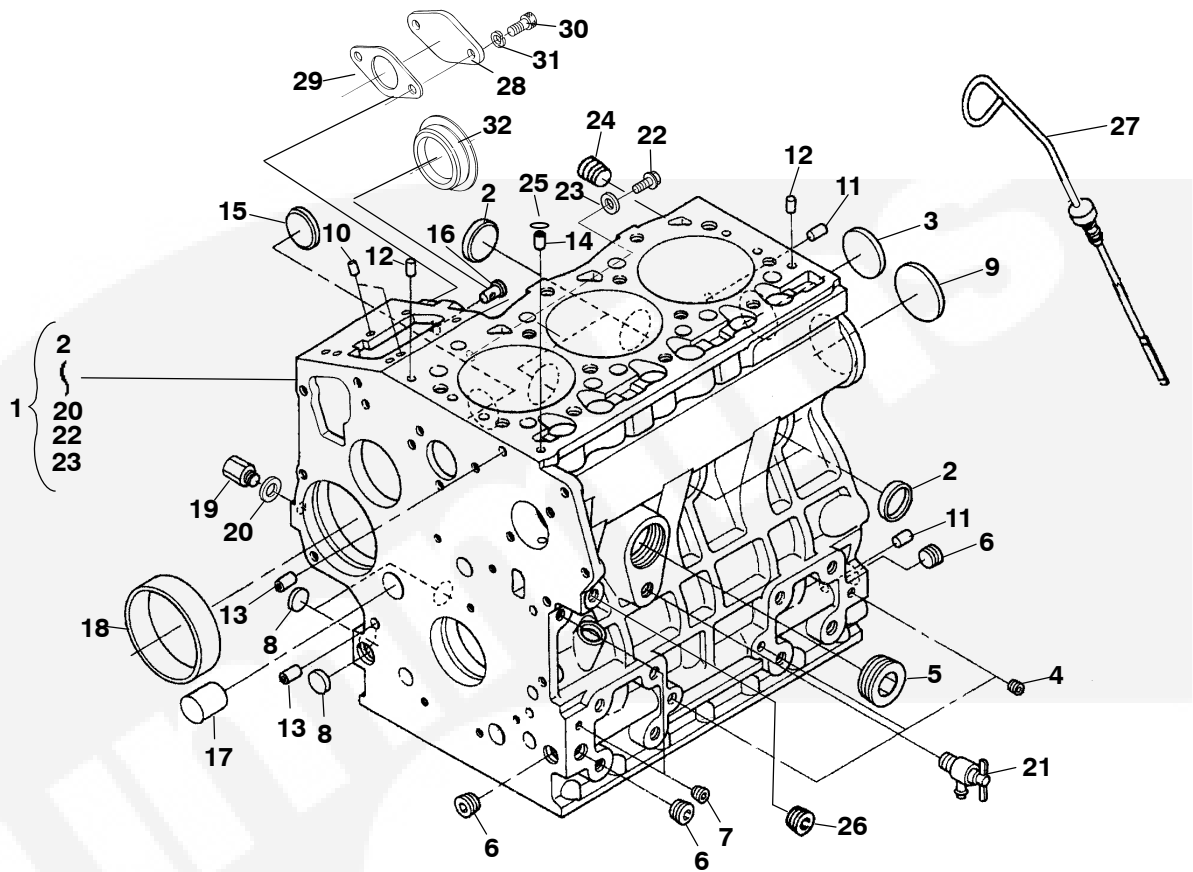
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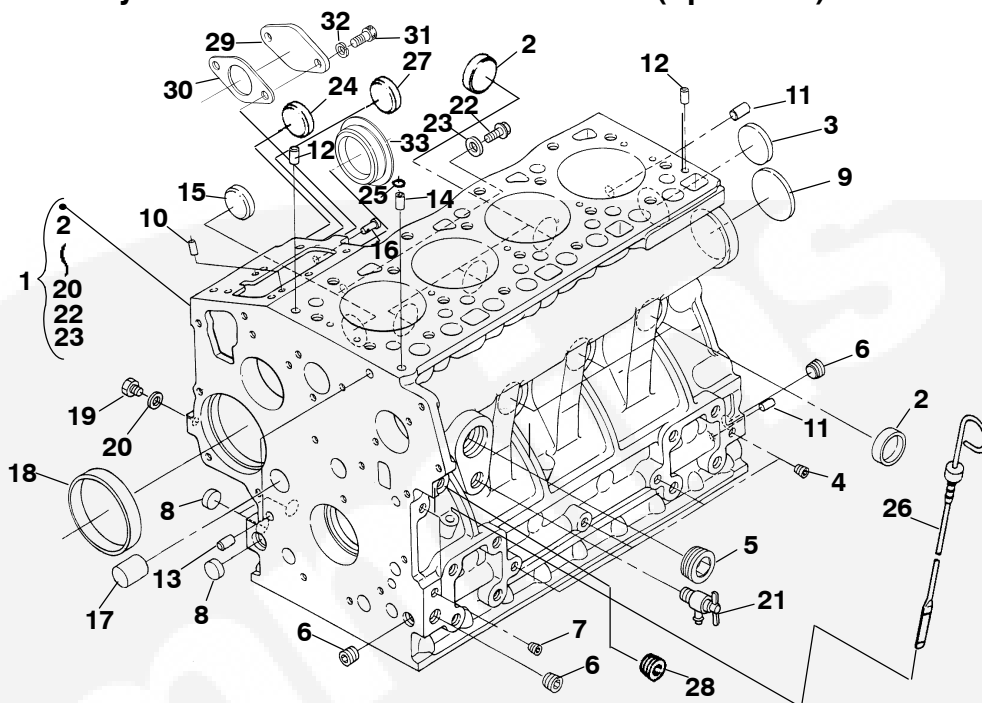
Cylinder Block MDKBL



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Assy, Engine Replacement MDKBL (Spec A)	15			*Plug
	100-3616-01	1	12V		185-6470	1	Spec A
	100-3616-02	1	24V		185-7212	1	Begin Spec B
			MDKBL (Spec B-D)	16	185-6857	1	*Pin, Start Spring
	100-3944-01	1	12V	17	185-6471	1	*Plug
	100-3944-02	1	24V	18	185-6472	1	*Bush, Governor Gear
			MDKBL (Spec E-F)	19	185-5845	1	*Plug
	100-4101-01	1	12V	20	185-2338	1	*Gasket
	100-4101-02	1	24V	21	185-5490	1	Cock Assy, Drain
			MDKBL (Begin Spec G)	22	185-2572	1	*Bolt, Flange
	A044B662	1	12V	23	185-2284	1	*Gasket
	A044B664	1	24V	24	185-6039	1	Plug (Spec A)
1			Block, Cylinder (Includes Parts Marked *)	25	185-2095	1	O'Ring (Spec A)
	185-7372	1	Spec A	26	185-5502	1	Plug (Spec A)
2	185-5484	4	*Cap, Sealing	27	185-6866	1	Indicator, Oil Lever
3	185-2412	1	*Cap, Sealing	28		1	Cover, Solenoid
4	185-2188	3	*Plug		185-6578	2	Spec A
5	185-6856	1	*Plug		184-0071	2	Begin Spec B
6	185-6468	3	*Plug	29			Gasket
7	185-2233	2	*Plug		185-6579	1	Spec A
8	185-6121	3	*Plug, Expansion	30			Bolt, Hex Socket Head
9	185-6040	1	*Plug, Expansion		185-2403	2	Spec A
10	185-5486	2	*Pin, Straight		800-6548	2	Begin Spec B
11	185-5487	2	*Pin, Straight	31	185-6759	2	Washer, Spring (Begin Spec B)
12	185-7420	2	*Pin, Straight	32			Cover, Hydraulic Pump
13	185-2115	2	*Pin, Pipe		185-7223	1	Spec B-D
14	185-6469	1	*Pin, Pipe		120-1386	1	Begin Spec E

* - Parts Included in Cylinder Block.

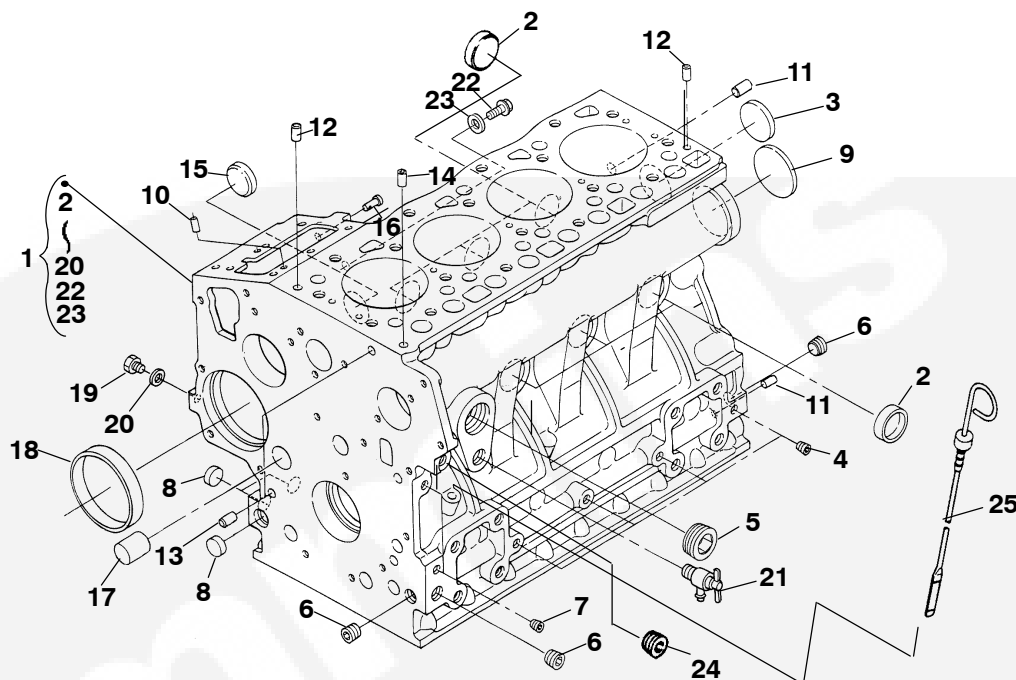
Cylinder Block MDKBM and MDKBN (Spec A-D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			Engine, Replacement MDKBM (Spec A)	11	185-5487	2	*Pin, Straight
	100-3811-01	1	12V	12	185-5843	2	*Pin, Straight Spec A
	100-3811-02	1	24V		185-7420	2	Begin Spec B
			MDKBM (Spec B-D)	13	185-2115	2	*Pin, Pipe
	100-3945-01	1	12V	14	185-6469	1	*Pin, Pipe
	100-3945-02	1	24V	15	185-7212	1	*Plug
			MDKBN (Spec A)	16	185-2102	1	*Pin, Start Spring
	100-3812-01	1	12V	17	185-6471	1	*Plug
	100-3812-02	1	24V	18	185-6472	1	*Bush, Governor Gear
			MDKBN (Spec B-D)	19	185-5845	1	*Plug
	100-3946-01	1	12V	20	185-2338	1	*Gasket
	100-3946-02	1	24V	21	185-5490	1	Cock Assy, Drain
1			Block, Cylinder (Includes Parts Marked *)	22	185-2572	1	*Bolt, Flange
			MDKBM	23	185-2284	1	*Gasket
	185-7245	1	Spec A	24	185-6889	1	Cap, Sealing
			MDKBN	25	185-2095	1	O'Ring (Spec A)
	185-7302	1	Spec A	26	185-6866	1	Indicator, Oil Level
2	185-5484	6	*Cap, Sealing	27	185-7212	1	Plug
3	185-2412	1	*Cap, Sealing	28	184-0072	1	Plug Square Head
4	185-2188	4	*Plug	29	184-0071	1	Cover, Solenoid
5	185-6856	1	*Plug	30			
6	185-6468	3	*Plug	31	800-6548	2	Bolt, Hex Socket Head
7	185-2233	2	*Plug	32	185-2380	2	Washer Spring
8	185-6121	3	*Plug, Expansion	33	185-7223	1	Cover, Hydraulic Pump
9	185-6040	1	*Plug, Expansion				
10	185-5486	2	*Pin, Straight				

* - Parts Included in Cylinder Block.

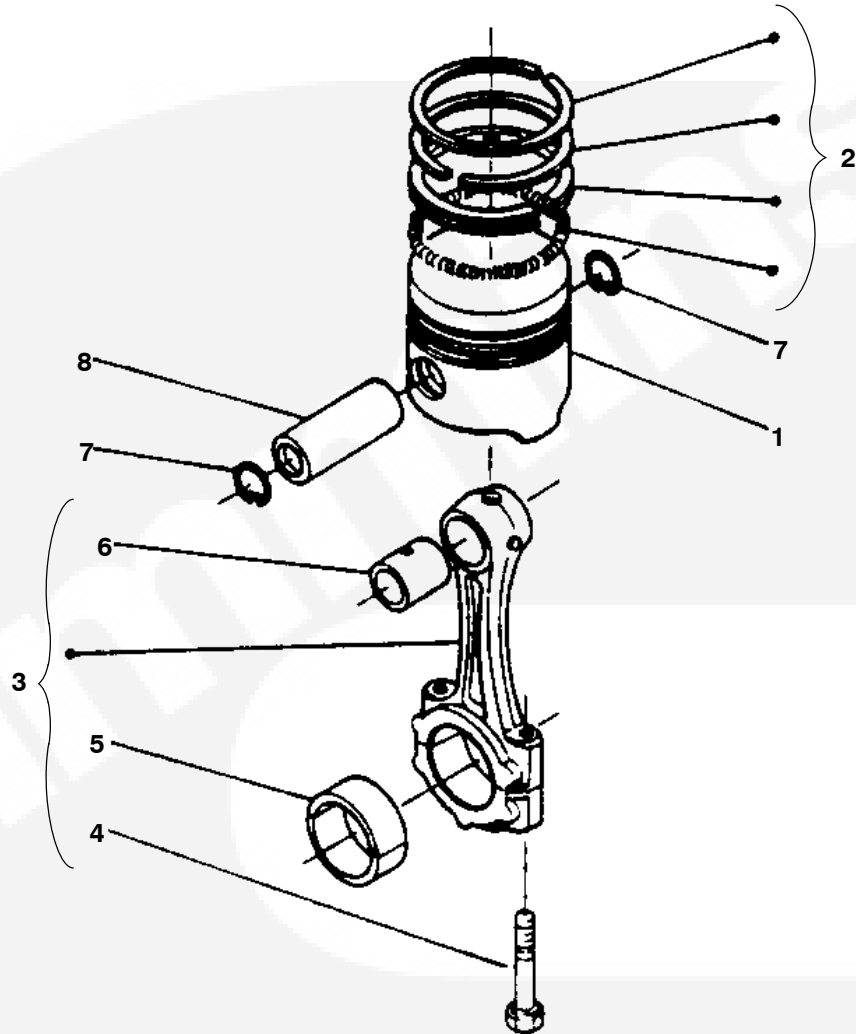
Cylinder Block MDKBM and MDKBN (Begin Spec E)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			Engine, Replacement (Spec E-F)	11	185-5487	2	*Pin, Straight
	100-4102-01	1	12V	12	185-5843		*Pin, Straight
	100-4102-02	1	24V	13	185-2115	2	*Pin, Pipe
			(Begin Spec G)	14	185-6469	1	*Pin, Pipe
	A044B666	1	12V	15	185-7212	1	*Plug
	A044B669	1	24V	16	181-9093	1	*Pin, Start Spring
1	110-4093	1	Block, Cylinder (Includes Parts Marked *)	17	185-6471	1	*Plug
2	185-5484	6	*Cap, Sealing	18	185-6472	1	*Bush, Governor Gear
3	185-2412	1	*Cap, Sealing	19	185-5845	1	*Plug
4	185-2188	4	*Plug	20	185-2338	1	*Gasket
5	185-6856	1	*Plug	21	185-5490	1	Cock Assy, Drain
6	185-6468	3	*Plug	22	185-2572	1	*Bolt, Flange
7	185-2233	2	*Plug	23	185-2284	1	*Gasket
8	185-6121	3	*Plug, Expansion	24	184-0072	1	Plug Square Head
9	185-6040	1	*Plug, Expansion	25	185-6866	1	Indicator, Oil Level
10	185-5486	2	*Pin, Straight				

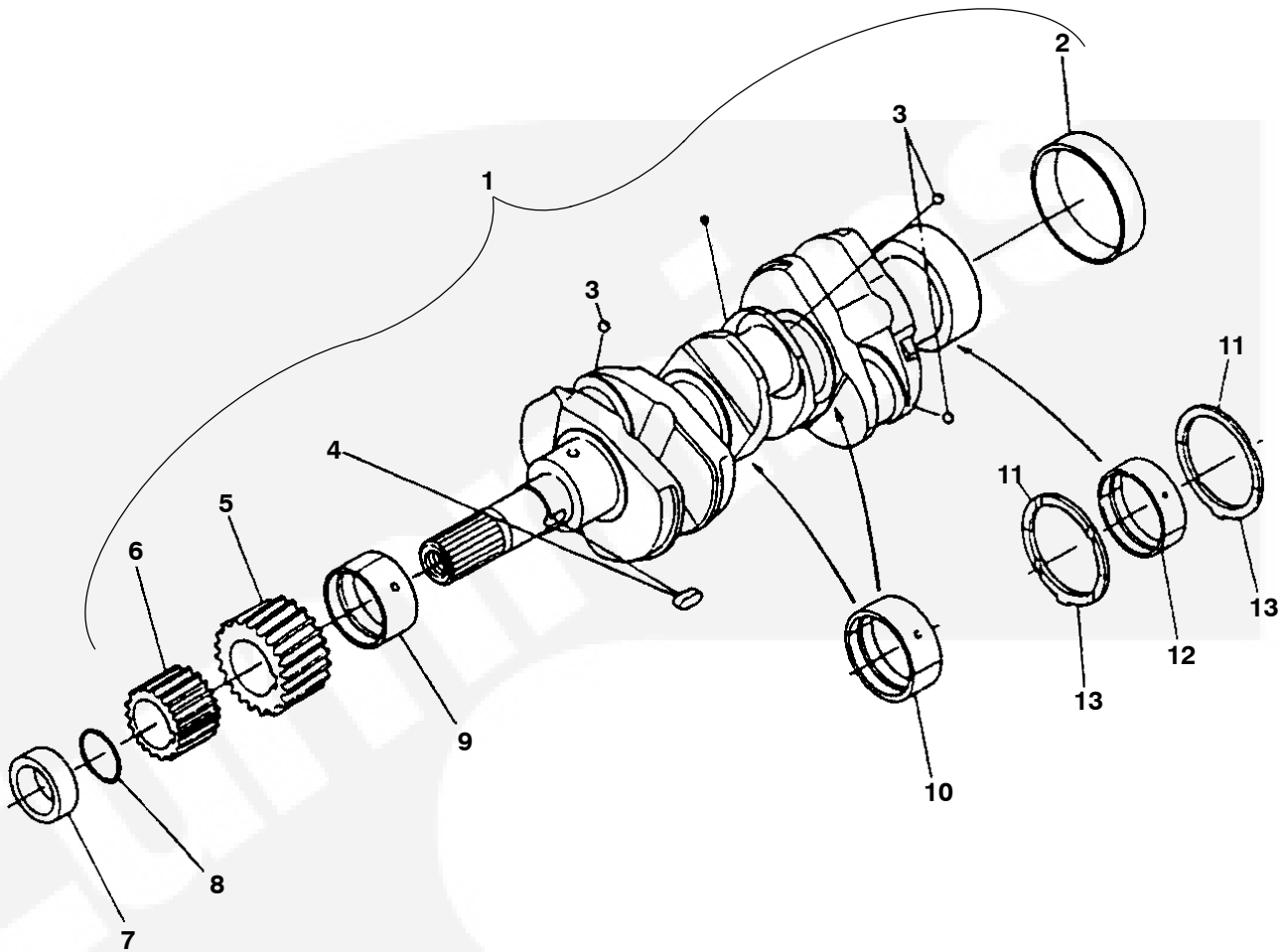
* - Parts Included in Cylinder Block.

Piston MDKBL



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Piston	4			Bolt, Connecting Rod
			Spec A	185-6535	6		Spec A
185-7308	3		Standard	181-9102	6		Begin Spec B
185-7309	3		.5mm Oversize	5			Bearing, Connecting Rod
			Spec B-D	185-6536	3		Standard
112-0319	3		Standard	185-6537	3		.2mm Undersize
112-0328	3		.5mm Oversize	185-6538	3		.4mm Undersize
			Begin Spec E	6			Bushing, Connecting Rod
112-0319	3		Standard	185-6534	3		Spec A
112-0320	3		.5mm Oversize	114-0450	3		Begin Spec B
2			Ring Set, Piston	7	185-6532	6	Circlip, Piston Pin
185-7310	3		Standard	8	185-6531	3	Pin, Piston
185-7311	3		.5mm Oversize				
3			Rod Assy, Connecting (Includes Bolt, Bearing and Bushing)				
			Spec A				
185-6533	3		Spec A				
114-0430	3		Begin Spec B				

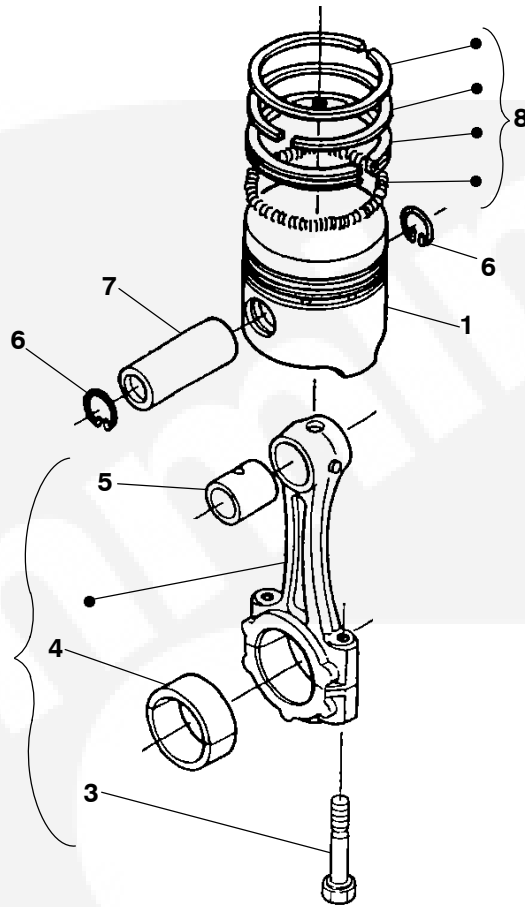
Crankshaft MDKBL



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-7376	1	Crankshaft (Includes Parts Marked *)	11	185-5938	2	Washer, Thrust Standard
2	185-6543	1	*Sleeve, Crankshaft		185-6555	2	.2mm, Oversize
3	185-5924	3	*Ball Spec		185-6556	2	.4mm, Oversize
4	185-6541	1	*Key	12	185-7430	1	Bearing, Crankshaft Standard
5	185-6540	1	*Gear, Crankshaft		185-6553	1	.2mm, Undersize
6	185-6542	1	*Gear, Oil Pump Drive		185-6554	1	.4mm, Undersize
7	185-6544	1	Collar, Crankshaft	13	185-5941	2	Washer, Thrust Standard
8	185-6545	1	O'Ring Spec A		185-5942	2	.2mm, Oversize
	185-7429	1	Begin Spec B		185-5943	2	.4mm, Oversize
9			Bearing, Crankshaft				
	185-6546	1	Standard				
	185-6547	1	.2mm, Undersize				
	185-6548	1	.4mm, Undersize				
10			Bearing, Crankshaft				
	185-6549	2	Standard				
	185-6550	2	.2mm, Undersize				
	185-6551	2	.4mm, Undersize				

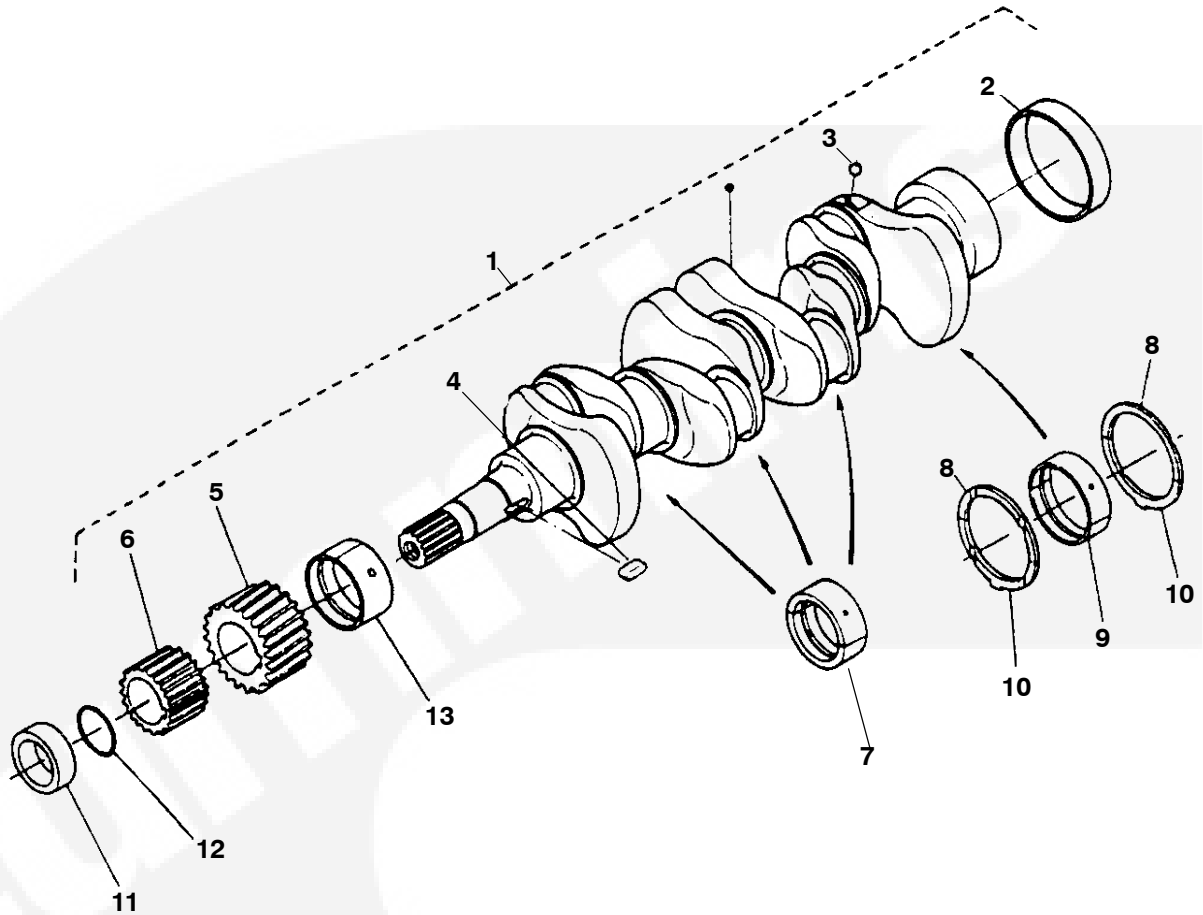
* - Parts Included in Crankshaft.

Piston MDKBM and MDKBN



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Piston	3			Bolt, Connecting Rod
			MDKBM	185-6535	8		Spec A
			Spec A-D	181-9102	8		Begin Spec B
185-6745	4		Standard (Spec A)	4			Bearing, Connecting Rod
185-6746	4		.5mm, Oversize	185-6536	4		Standard
			MDKBN	185-6537	4		.2mm Undersize
			Spec A	185-6538	4		.4mm Undersize
185-7308	4		Standard	5			Bushing, Connecting Rod
185-7309	4		.5mm Oversize	185-6534	8		Spec A
			Spec B-D	114-0450	8		Begin Spec B
112-0319	4		Standard	6	185-6532	8	Circlip, Piston Pin
112-0328	4		.5mm Oversize	7	185-6531	4	Pin, Piston
			MDKBM and MDKBN	8			Ring Set, Piston
			Begin Spec E				MDKBM (Spec A-D)
112-0319	4		Standard	185-6529	4		Standard
112-0320	4		.5mm Oversize	185-6530	4		.5mm Oversize
2			Rod Assy, Connecting (Includes				MDKBN (Spec A-D)
			Bolt, Bearing and Bushing)	185-7310	4		Standard
185-6533	4		Spec A	185-7311	4		.5mm Oversize
114-0430	4		Begin Spec B				MDKBM and MDKBN
							(Begin Spec E)
				181-9134	4		Standard
				181-9135	4		.5mm Oversize

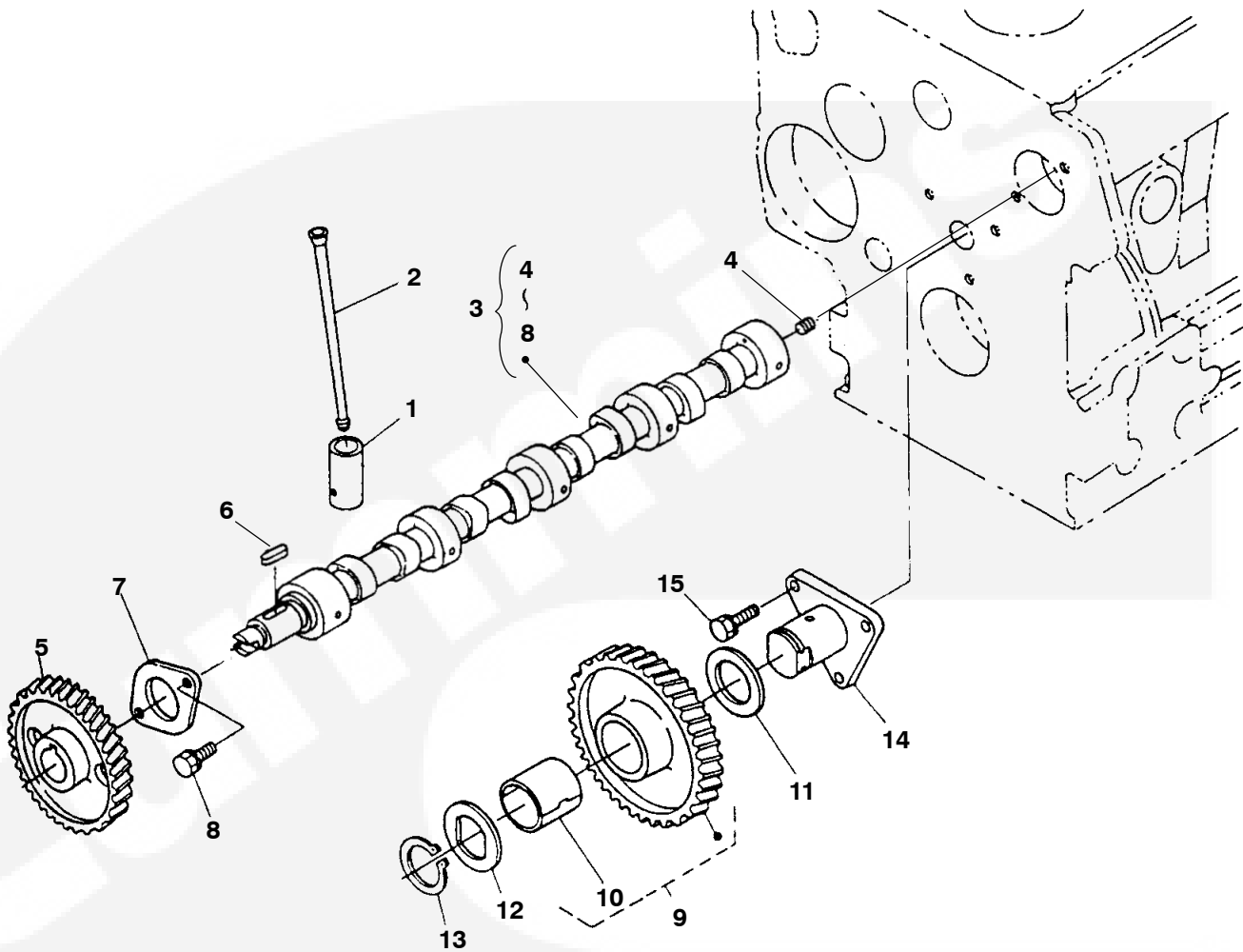
Crankshaft MDKBM and MDKBN



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Crankshaft (Includes Parts Marked *)	9			Bearing, Crankshaft Spec A-D
	185-7249	1	MDKBM (Spec A-D)		185-6552	1	Standard
	185-7312	1	MDKBN (Spec A-D)		185-6553	1	.2mm, Undersize
	185-7312	1	MDKBM and MDKBN (Begin Spec E)		185-6554	1	.4mm, Undersize
2	185-6543	1	*Sleeve, Crankshaft		104-2121	1	Standard
3	185-5924	4	*Ball MDKBM, MDKBN		510-0264	1	.2mm, Undersize
4	185-6541	1	*Key		104-2158	1	.4mm, Undersize
5	185-6540	1	*Gear, Crankshaft	10			Washer, Thrust
6	185-6542	1	*Gear, Oil Pump Drive		185-5941	2	Standard
7			Bearing, Crankshaft MDKBM, MDKBN		185-5942	2	.2mm, Oversize
	185-6549	3	Standard		185-5943	2	.4mm, Oversize
	185-6550	3	.2mm, Undersize	11	185-6544	1	Collar, Crankshaft
	185-6551	3	.4mm, Undersize	12			O'Ring
8			Washer, Thrust		185-6545	1	Standard
	185-5938	2	Standard		185-7429	1	.2mm, Undersize
	185-6555	2	.2mm, Oversize	13			Bearing, Crankshaft
	185-6556	2	.4mm, Oversize		185-6546	1	Standard
					185-6547	1	.2mm, Undersize
					185-6548	1	.4mm, Undersize

* - Parts Included With Crankshaft.

Camshaft MDKBL

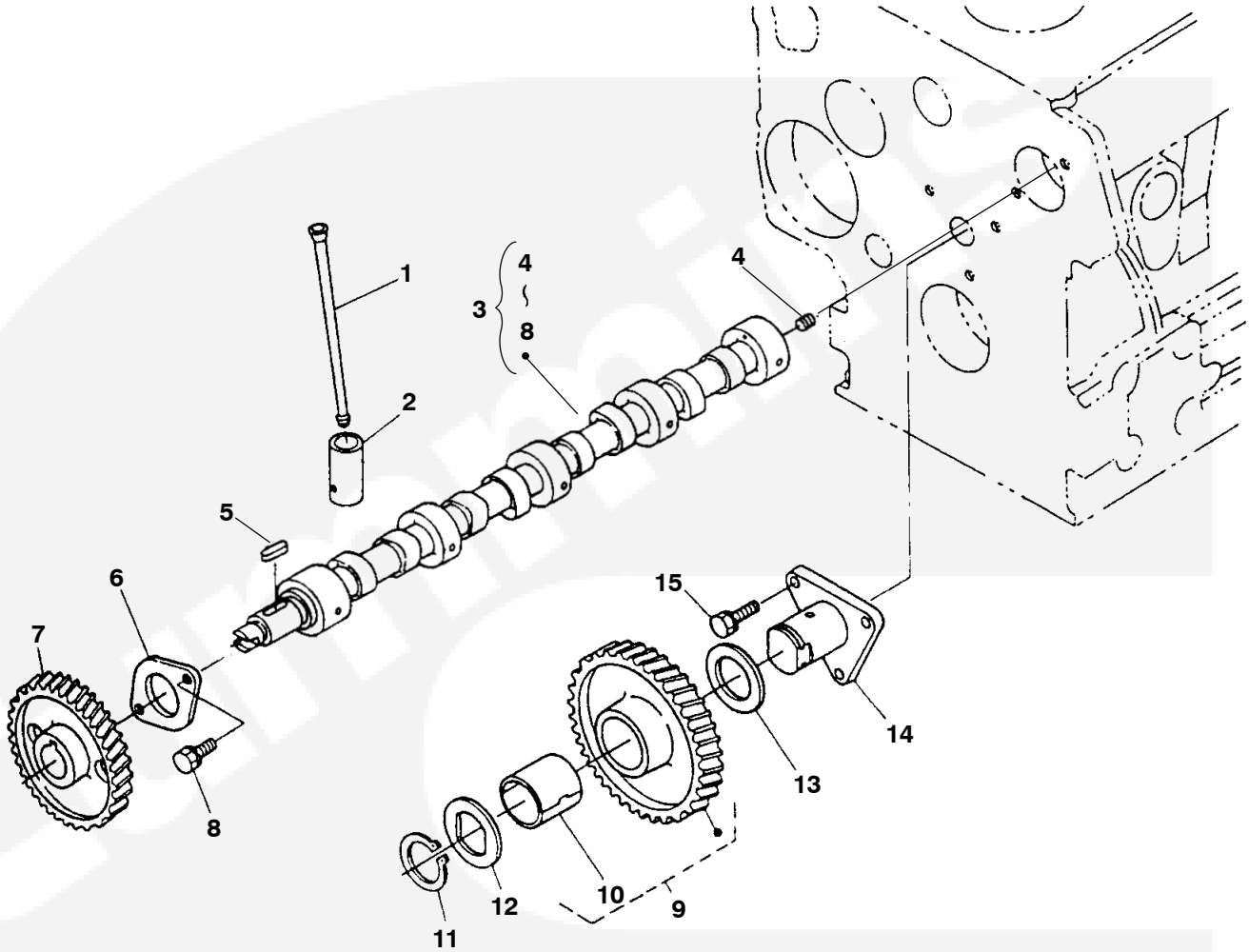


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Tappet
	185-6516	6	Spec A-D
	115-0541	6	Begin Spec E
2	185-6517	6	Rod, Push
3			Camshaft Assy (Includes Parts Marked *)
	185-6873	1	Spec A-D
	181-9120	1	Begin Spec E
4	185-5558	1	*Screw, Set
5	185-6519	1	*Gear, Cam
6	185-5560	1	*Key, Feather
7	185-6520	1	*Stopper, Camshaft

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8			*Bolt
	185-2387	2	Spec A-D
	185-2388	2	Begin Spec E
9	185-6521	1	Gear Assy, Idle (Includes Bushing)
10	185-6522	1	Bushing, Idle Gear
11	185-6523	1	Collar, Idle Gear
12	185-6524	1	Collar, Idle Gear
13	185-6525	1	Circlip, Idle Gear
14	185-6526	1	Shaft, Idle Gear
15	185-2388	3	Bolt

* - Parts Included in Camshaft Assy.

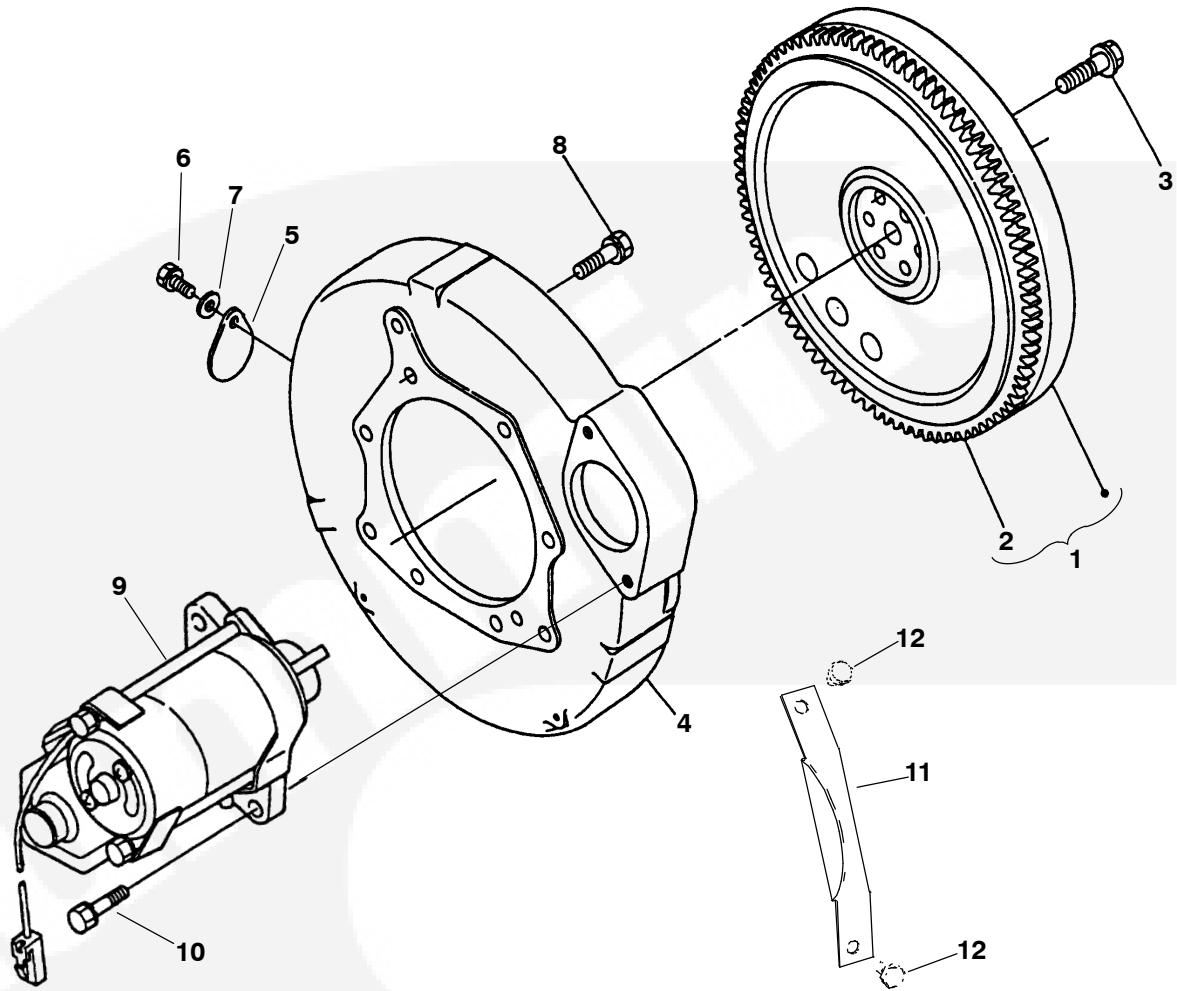
Camshaft MDKBM and MDKBN



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-6517	8	Rod, Push	185-2387	2	Spec A-D	
2			Tappet	185-2388	2	Begin Spec E	
	185-6516	8	Spec A-D	9	185-6521	1	Gear Assy, Idle (Includes Bushing)
	115-0541	8	Begin Spec E	10	185-6522	1	Bushing, Idle Gear
3			Camshaft Assy (Includes Parts Marked *)	11	185-6525	1	Circlip, Idle Gear
	185-6518	1	Spec A	12	185-6524	1	Collar, Idle Gear
	181-9126	1	Begin Spec B	13	185-6523	1	Collar, Idle Gear
4	185-5558	1	*Screw, Set	14	185-6526	1	Shaft, Idle Gear
5	185-5560	1	*Key, Feather	15	185-2388	3	Bolt
6	185-6520	1	*Stopper, Camshaft				
7	185-6519	1	*Gear, Cam				
8			*Bolt				

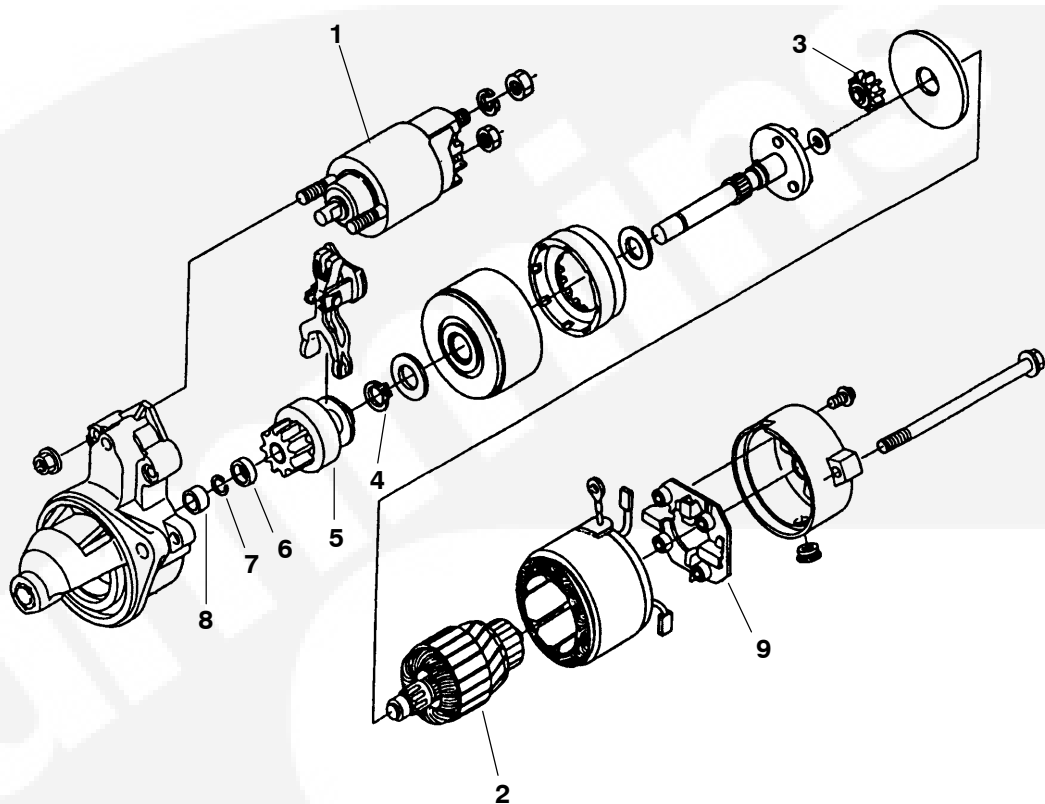
* - Parts Included in Camshaft Assy.

Flywheel



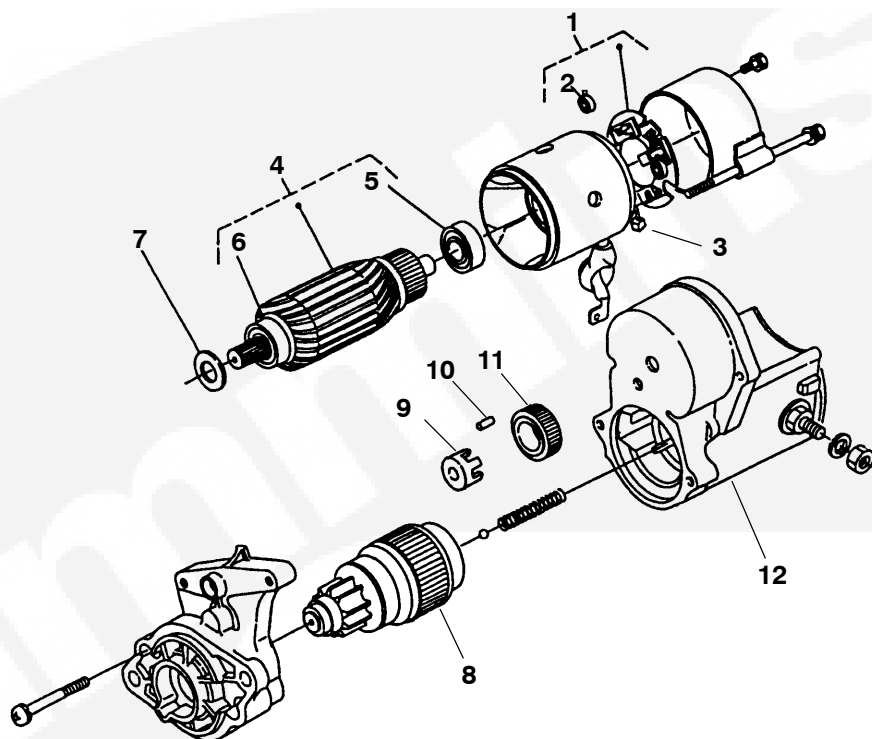
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Flywheel (Includes Ring Gear) Spec A-D	7	185-7221	1	Washer, Plain
	185-7217	1	MDKBL	8	185-2178	8	Bolt
	185-7250	1	MDKBM and MDKBN	9			Starter (See Separate Page for Components)
			Begin Spec E		185-7104	1	12V
	104-2156	1	MDKBL		185-7105	1	24V
	104-2159	1	MDKBM and MDKBN	10	185-2564	2	Screw
2	185-2170	1	Gear, Ring	11	191-2275-02	1	Guard, Starter
3	185-6409	6	Bolt, Flywheel	12	815-0194	2	Screw, Hex Head (#10-32 x .38'')
4	185-7218	1	Housing, Flywheel				
5	185-7219	1	Cover				
6			Bolt				
	185-6956	1	MDKBL				
	185-7222	1	MDKBM and MDKBN				

Starter Components (12V)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	185-7104	1	Starter	6	185-7236	1	Collar
1	185-2658	1	Switch, Magnetic	7	185-6386	1	Ring, Snap
2	185-7231	1	Armature	8	185-7233	1	Bearing, Oilless
3	185-7234	3	Gear	9	185-7230	1	Holder, Brush
4	185-7235	1	Ring, Snap	Note: Parts not Identified are Not For Sale.			
5	185-7232	1	Clutch, Starter				

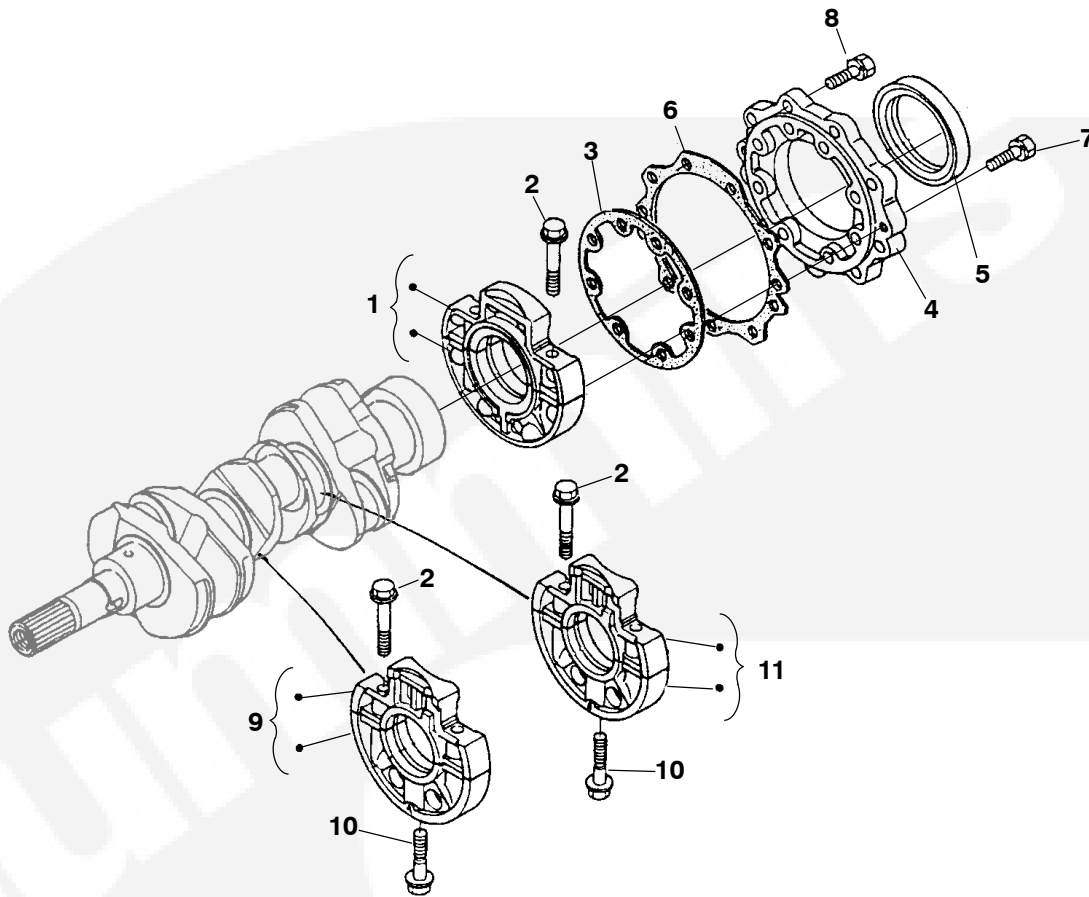
Starter Components (24V)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	185-7105	1	Starter	8	185-6354	1	Clutch
1	185-7240	1	Holder Assy, Brush	9	185-6362	1	Retainer
2	185-6358	4	Spring, Brush	10	191-2252	5	Roller
3	185-7237	2	Brush, Yoke	11	185-7296	5	Gear, Pinion
4	185-7238	1	Armature	12	185-7239	1	Switch, Magnetic
5	185-6442	1	Bearing, Ball				
6	185-6441	1	Bearing, Ball				
7	185-6365	1	Washer, Felt				

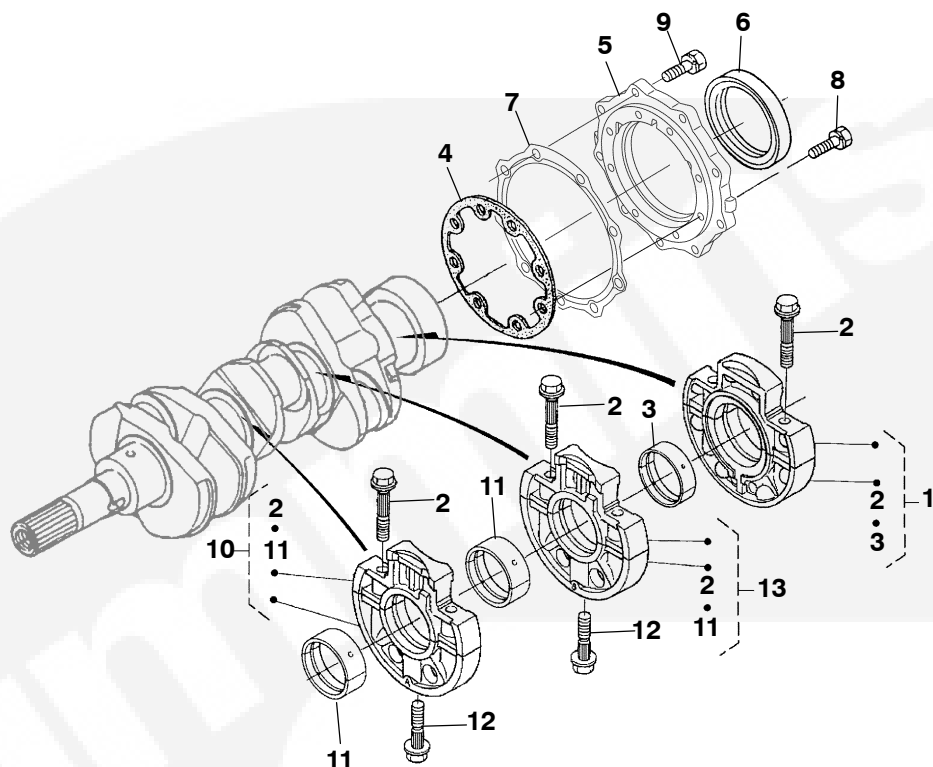
Note: Parts Not Identified are Not Sold Separately.

Main Bearing Case (MDKBL Spec A-D)



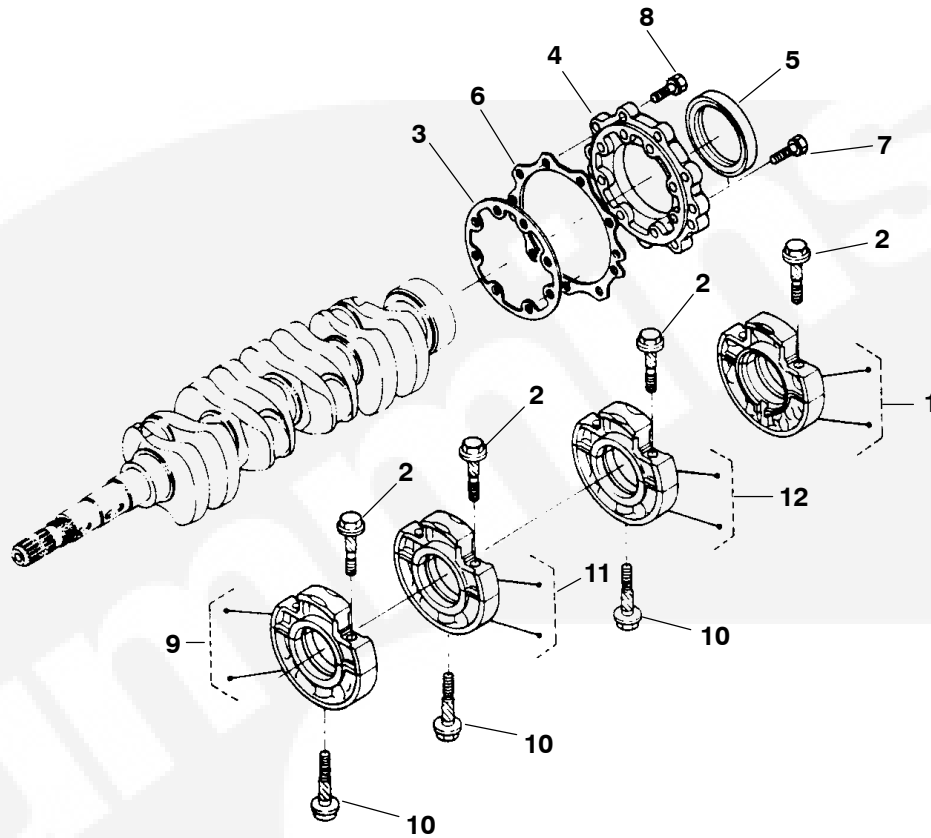
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-6506	1	Case Assy, Main Bearing	9			Case Assy, Main Bearing
2	185-6507	6	Bolt, Bearing Case		185-7305	1	Spec A
3			Gasket, Bearing Case		185-3505	1	Begin Spec B
	185-6869	1	Spec A	10			Bolt, Bearing Case
	185-6865	1	Begin Spec B		185-6513	2	Spec A
4	185-6509	1	Cover, Bearing Case		185-6507	2	Begin Spec B
5	185-6510	1	Seal, Oil	11			Case Assy, Main Bearing
6	185-6871	1	Gasket, Bearing Case Cover		185-7306	1	Spec A
7	185-2391	8	Bolt		185-7306	1	Begin Spec B
8	185-2390	9	Bolt				

Main Bearing Case (MDKBL Begin Spec E)



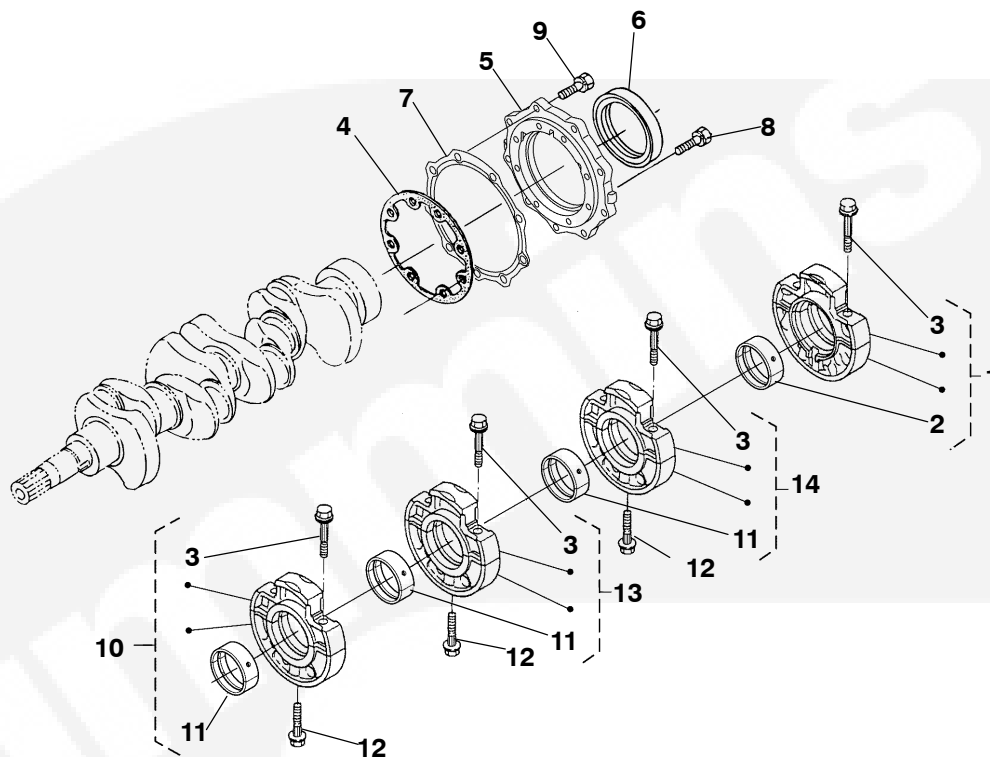
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-2120	1	Case Assy, Main Bearing	8	185-2391	8	Bolt
2	185-6507	3	Bolt, Bearing Case	9	185-2390	9	Bolt
3			Bearing	10	104-2118	1	Assy, Bearing Case Main
	104-2121	1	Standard Set	11			Metal, Crankshaft
	104-2157	1	0.20mm Set		185-6549	2	Standard Set
	181-9137	1	0.40mm Set		185-6550	2	0.20mm Set
4	181-9124	1	Gasket, Bearing Case		185-6551	2	0.40mm Set
5	232-4204	1	Cover, Bearing Case	12	185-6513	2	Bolt, Bearing Case
6	509-0547	1	Seal, Oil	13	104-2119	1	Assy, Bearing Case Main
7	185-6511	1	Gasket, Bearing Case Cover				

Main Bearing Case (MDKBM and MDKBN Spec A-D)



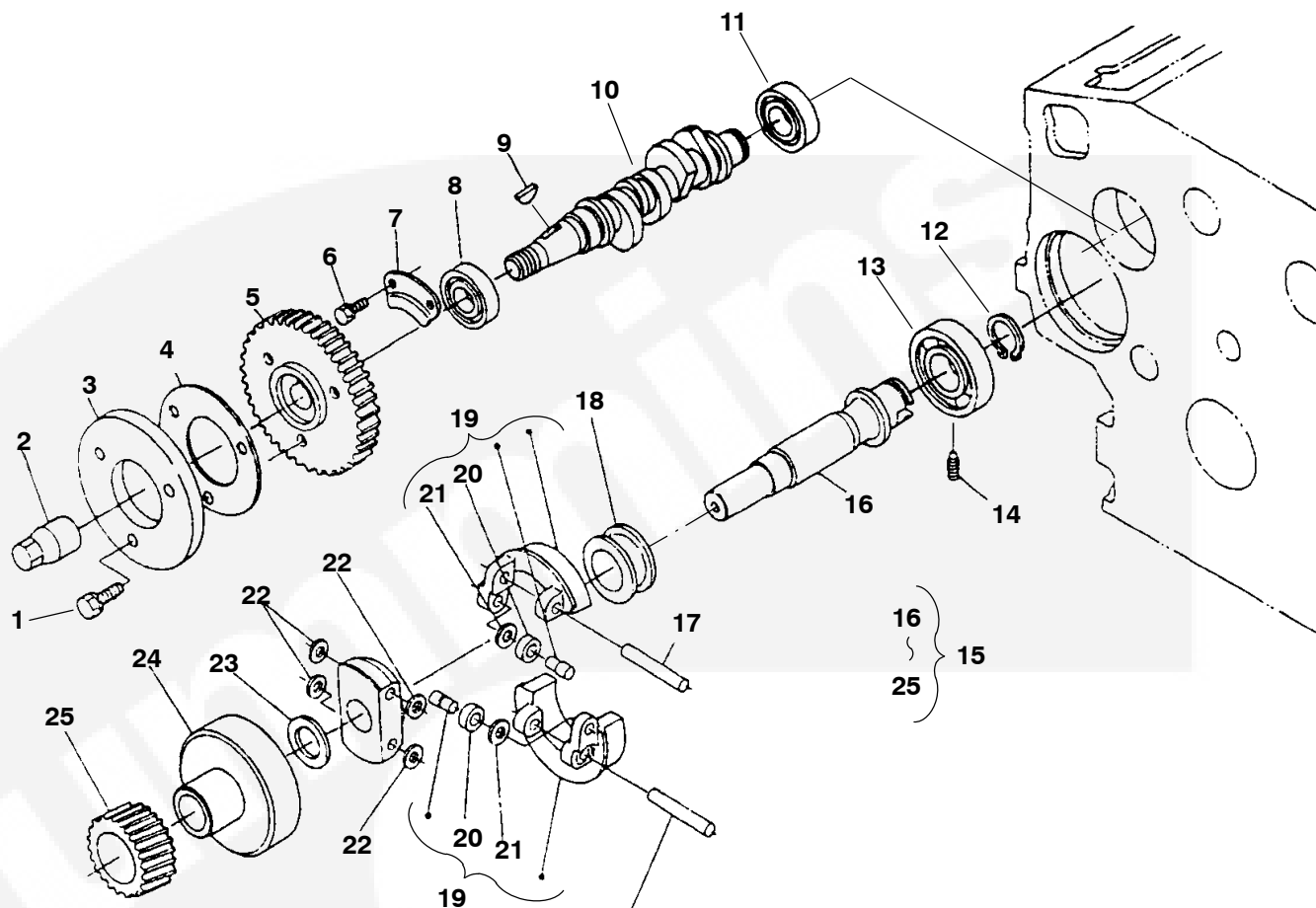
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-6506	1	Case, Main Bearing	10	185-6513	3	Bolt, Bearing Case
2	185-6507	8	Bolt, Bearing Case	11			Case, Main Bearing
3	185-6869	1	Gasket, Bearing Case		185-7306	1	MDKBN
4	185-6870	1	Cover, Bearing Case		185-6514	1	MDKBM
5	185-6510	1	Seal, Oil	12			Case, Main Bearing
6	185-6871	1	Gasket, Bearing Case Cover		185-6515	1	MDKBM (Spec A)
7	185-2391	8	Bolt		185-7305	1	MDKBN (Spec A)
8	185-2390	9	Bolt		185-7307	1	MDKBM, MDKBN
9			Case, Main Bearing				Begin Spec B
	185-7305	1	MDKBN (Spec A)				
	185-6512	1	MDKBM (Spec A)				
	185-7305	1	MDKBM, MDKBN				
			Begin Spec B				

Main Bearing Case (MDKBM and MDKBN Begin Spec E)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	104-2120	1	Case, Main Bearing	8	185-2391	8	Bolt
2	104-2121	1	Metal, Crankshaft	9	185-2390	9	Bolt
3	185-6507	8	Bolt, Bearing Case	10	104-2118	1	Assy Bearing Case, Main
4	181-9124	1	Gasket, Bearing Case	11	185-6549	3	Metal, Crankshaft
5	232-4204	1	Cover, Bearing Case	12	185-6513	3	Bolt, Bearing Case
6	509-0547	1	Seal, Oil	13	104-2119	1	Assy Bearing Case, Main
7	101-0868	1	Gasket, Case Cover	14	232-4226	1	Assy Bearing Case, Main

Fuel Camshaft (Spec A)

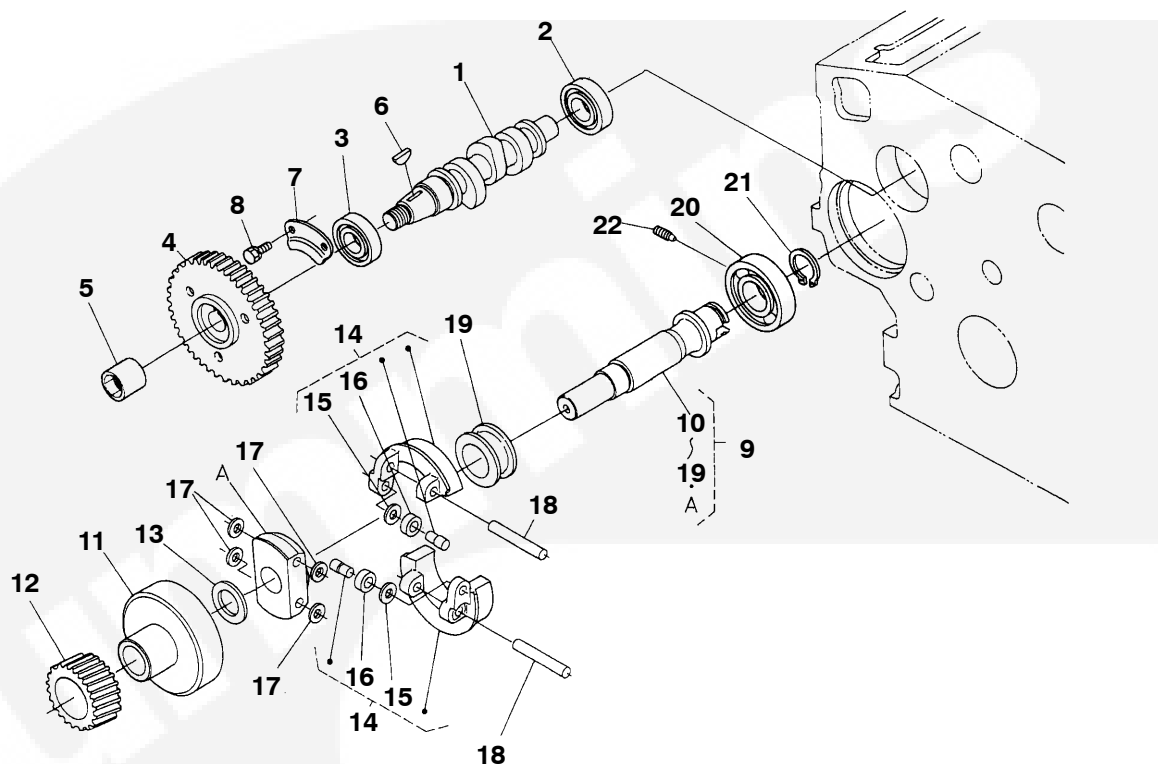


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-2389	3	Bolt
2	185-6560	1	Nut, Cap
3	185-6876	1	Cam, Fuel
4	185-6879	1	Washer
5	185-6558	1	Gear, Injection Pump
6	185-2386	2	Bolt
7	185-6562	1	Stopper, Fuel Camshaft
8	185-3093	1	Bearing, Ball
9	185-6561	1	Key, Woodruff
10			Camshaft, Fuel
	185-6875	1	MDKBL
	185-6741	1	MDKBM, MDKBN
11	510-0163	1	Bearing, Ball
12	185-6572	1	Circlip, Governor Shaft
13	185-6571	1	Bearing, Ball
14	185-6573	1	Screw, Set
15			Shaft Assy, Governor (Includes Parts Marked *)
	185-6877	1	MDKBL
	185-6563	1	MDKBM, MDKBN

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
16			*Shaft, Governor
	185-6878	1	MDKBL
	185-6564	1	MDKBM, MDKBN
17	185-6569	2	*Shaft, Governor Weight
18	185-6570	1	*Sleeve, Governor
19	185-6567	2	*Weight, Governor (Includes Bearing and Washer)
20	185-5959	2	Bearing
21	185-5960	2	Washer
22	185-6568	4	*Washer, Governor Weight
23	185-6566	1	*Collar, Governor Shaft
24	185-6880	1	*Holder, Governor Gear
25	185-6565	1	*Gear, Governor

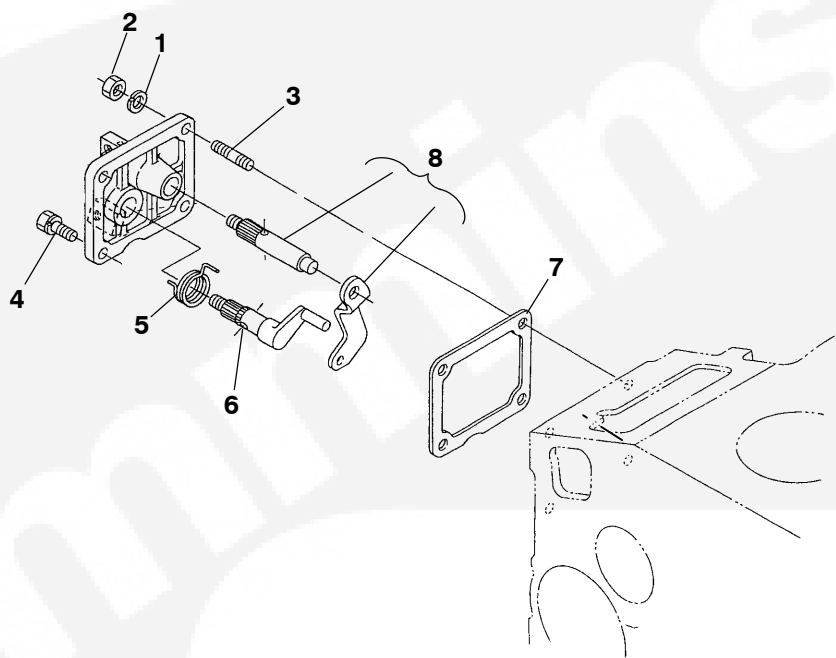
* - Parts Included in Governor Shaft Assy.

Fuel Camshaft (Begin Spec B)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Camshaft, Fuel	11	185-6880	1	Holder, Governor Gear
	185-6875	1	MDKBL	12	185-6565	1	Gear, Governor
	185-6741	1	MDKBM and MDKBN	13	185-6566	1	Collar, Governor Weight
2	181-9122	1	Bearing, Ball	14	185-6567	2	Comp Weight, Governor
3	181-9123	1	Bearing, Ball	15	185-5960	2	Washer
4	181-9223	1	Gear, Injection Pump	16	185-5959	2	Bearing
5	185-6560	1	Nut	17	185-6568	4	Washer, Governor Weight
6	185-6561	1	Key, Woodruff	18	185-6569	2	Shaft, Governor Weight
7	185-6562	1	Stopper, Fuel Camshaft	19	185-6570	1	Sleeve, Governor
8	185-2388	2	Bolt	20	185-6571	1	Bearing, Ball
9			Assy. Shaft, Governor	21	185-6572	1	Circlip, Governor Shaft
	185-6877	1	MDKBL	22	185-6573	1	Screw, Set
	185-6563	1	MDKBM and MDKBN				
10			Shaft, Governor				
	185-6878	1	MDKBL				
	185-6564	1	MDKBM and MDKBN				

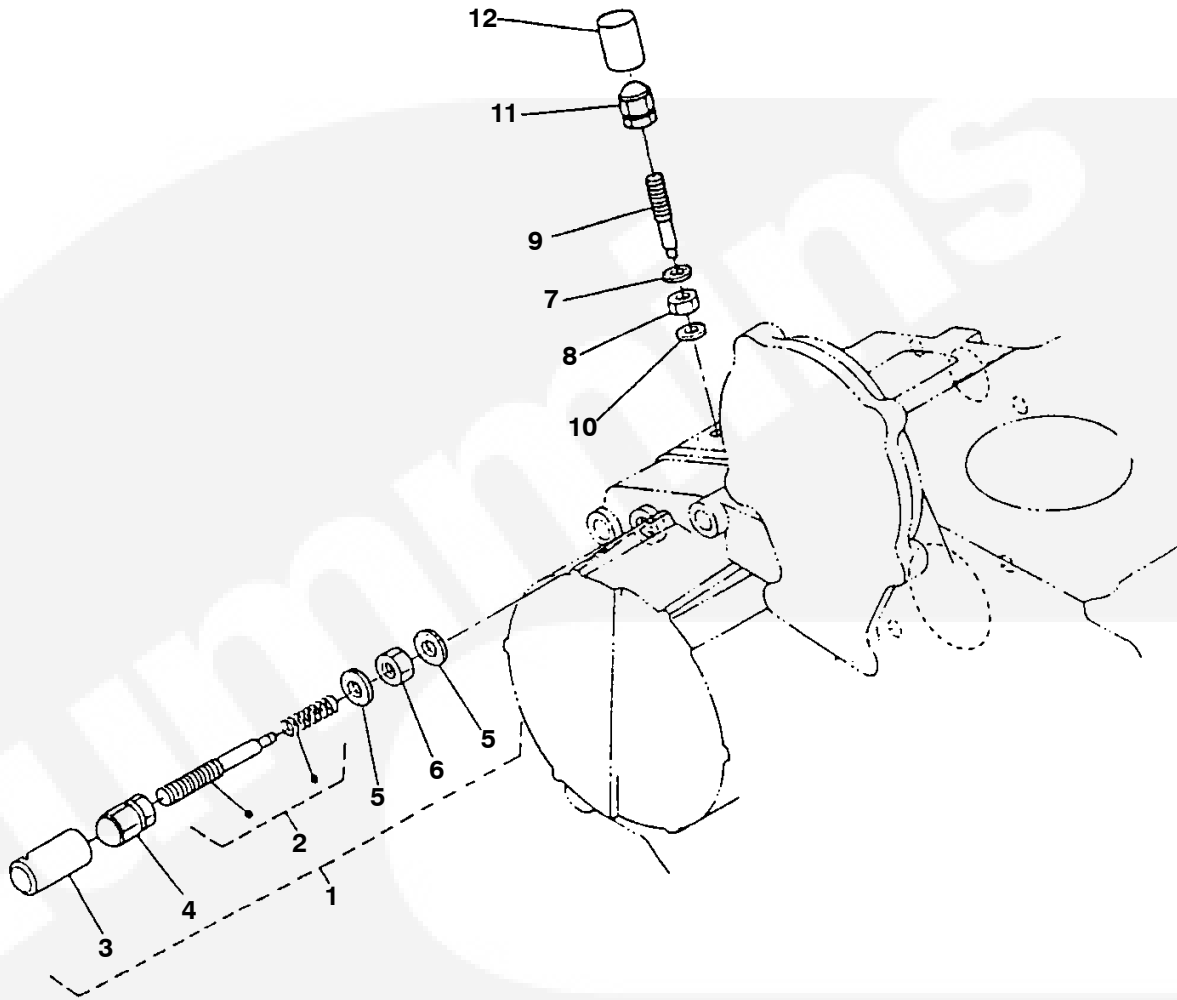
Speed Control Plate



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-6759	2	Washer, Spring	6	185-6615	1	*Shaft, Stop Lever
2	185-4255	2	Nut	7	185-6894	1	Gasket
3	185-7425	2	Stud	8	185-6612	1	Comp. Lever, Gov
4	185-2388	1	Bolt				
5	185-6614	1	*Spring, Return				

* - Parts Included in Control Plate Assy.

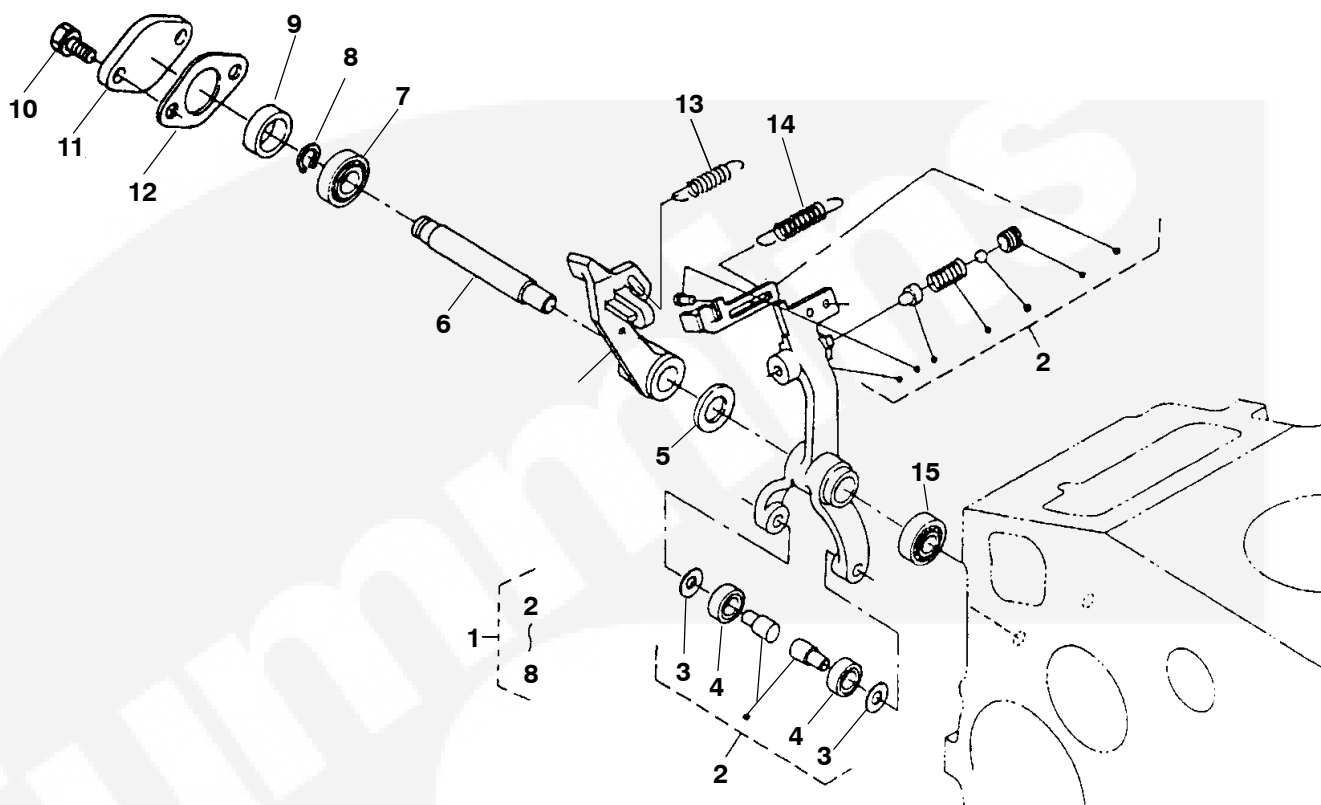
Governor Lever



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	181-9113	1	Assy, Governor Lever (Includes Parts Marked *)	8	185-6931	1	Nut, Lock
2	181-9114	1	*Bolt Assy, Adjusting	9	181-9104	1	Bolt, Adjusting
3	185-6930	1	*Cap	10	185-7313	1	Gasket
4	181-9067	1	*Nut, Cap	11	181-9067	1	Nut, Cap
5	185-2284	2	*Gasket	12	185-6932	1	Cap
6	185-5684	1	*Nut				
7	185-2284	1	Gasket				

* - Parts Included in Governor Lever Assy.

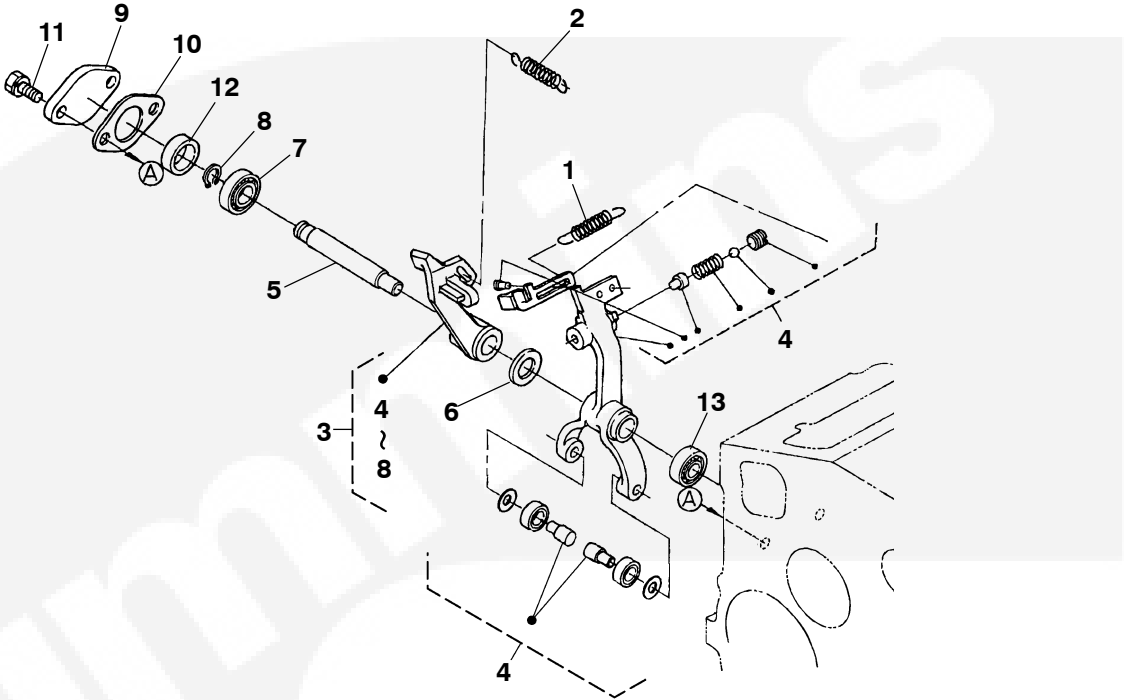
Governor (MDKBL, MDKBM and MDKBN Spec A-D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	181-9149	1	Lever Assy, Fork (Includes Parts Marked *)	12	185-6603	1	Gasket
2	185-7432	1	*Lever, Fork (Includes Washer and Bearing)	13			Spring, Governor MDKBL
3	185-5960	2	Washer		185-7377	1	60 Hz Spec A
4	185-5959	2	Bearing		185-7378	1	50 Hz Spec A
5	185-6163	1	*Washer, Plain		181-9152	1	Begin Spec B MDKBM, MDKBN
6			*Shaft, Fork Lever		185-7253	1	50 Hz Spec A
	185-6519	1	MDKBL		181-9150	1	Begin Spec B
	181-9105	1	MDKBM, MDKBN	14			Spring, Start
7	185-6600	1	*Bearing, Miniature		185-6891	1	MDKBL
8	185-6601	1	*Circlip, External		185-6593	1	MDKBM, MDKBN
9	185-6604	1	Collar	15	185-6605	1	Bearing, Miniature
10	185-2386	2	Bolt				
11	185-6602	1	Cover, Fork Lever Shaft				

* - Parts Included in Fork Lever Assy.

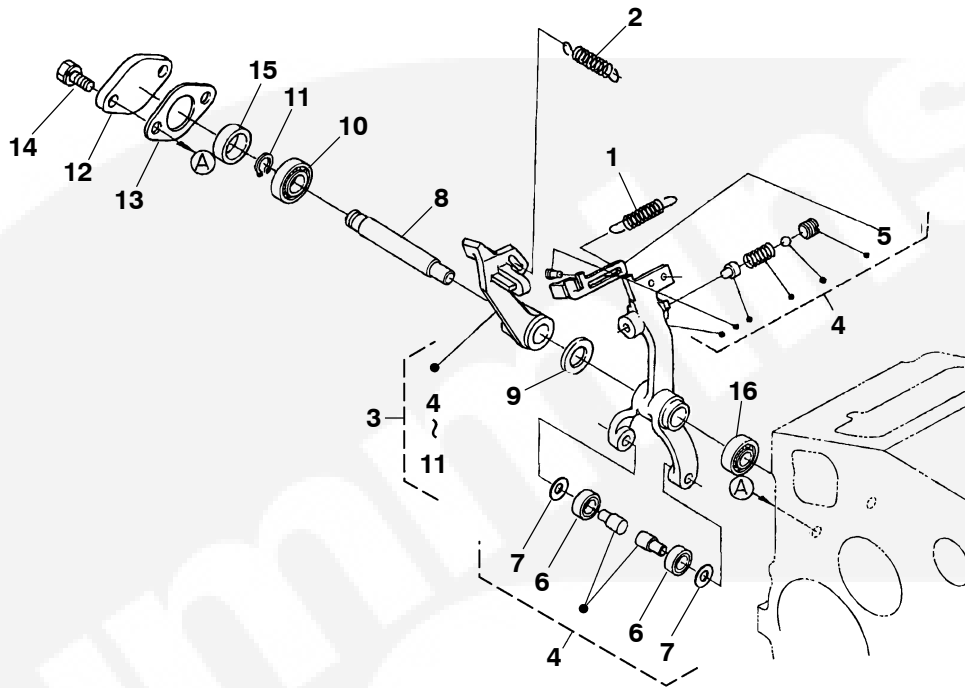
Governor (MDKBL Begin Spec E)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-6891		Spring, Start	8	185-6601	1	*Circlip, External
2	181-9152		Spring, Governor	9	150-2927	1	Cover, Fork Lever Shaft
3	181-9149	1	Lever Assy, Fork (Includes Parts Marked *)	10	185-6603	1	Gasket
4	185-7432	1	*Lever, Fork (Includes Washer and Bearing)	11	185-2386	2	Bolt
5	185-6599		*Shaft, Fork Lever	12	185-6604	1	Collar
6	185-6163	1	*Washer, Plain	13	185-6605	1	*Bearing, Miniature
7	185-6600	1	Bearing, Miniature				

* - Parts Included in Fork Lever Assy.

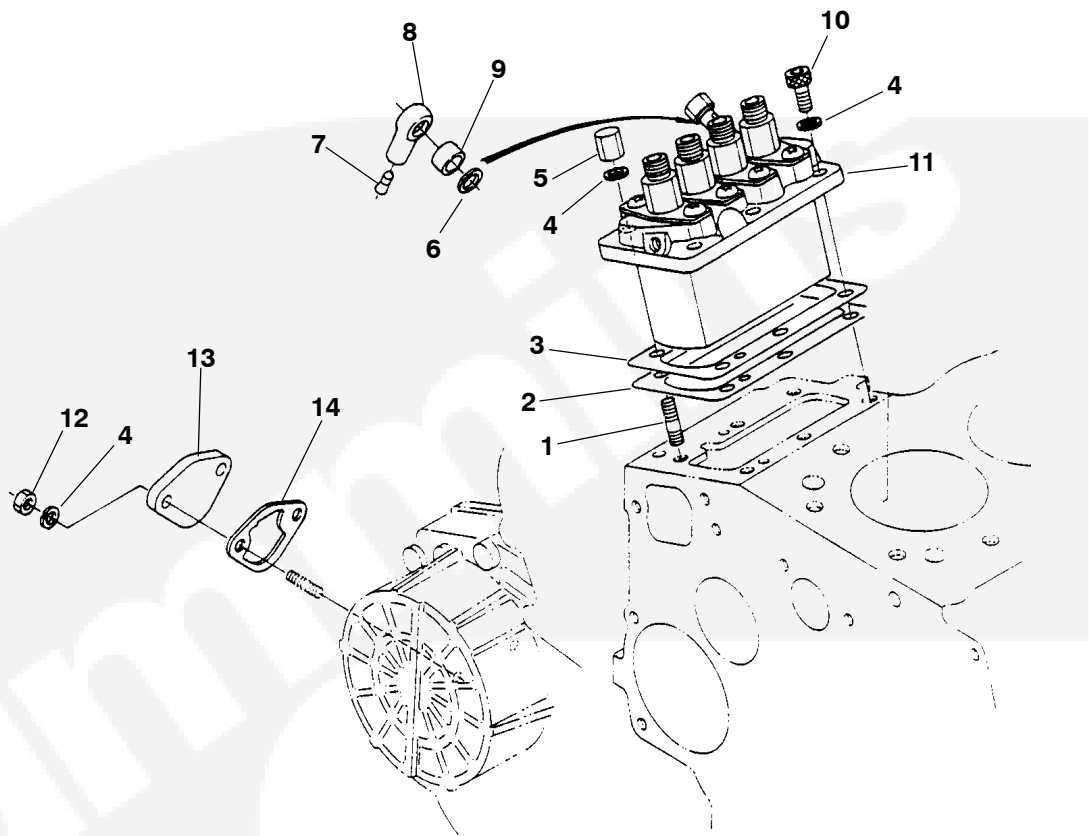
Governor (MDKBM and MDKBN Begin Spec E)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-6593	1	Spring, Start	9	185-6163	1	*Washer, Plain
2	181-9150	1	Spring, Governor	10	185-6600	1	*Bearing, Miniature
3	181-9149	1	Lever Assy, Fork (Includes Parts Marked *)	11	185-6601	1	*Circlip, External
4	185-7432	1	*Lever, Fork (Includes Washer and Bearing)	12	150-2927	1	Cover, Fork Lever Shaft
5	185-6597	1	Lever, Thrust	13	185-6603	1	Gasket
6	185-5959	2	Bearing	14	185-2386	2	Bolt
7	185-5960	2	Washer	15	185-6604	1	Collar
8	181-9105	1	*Shaft, Fork Lever	16	185-6605	1	Bearing, Miniature

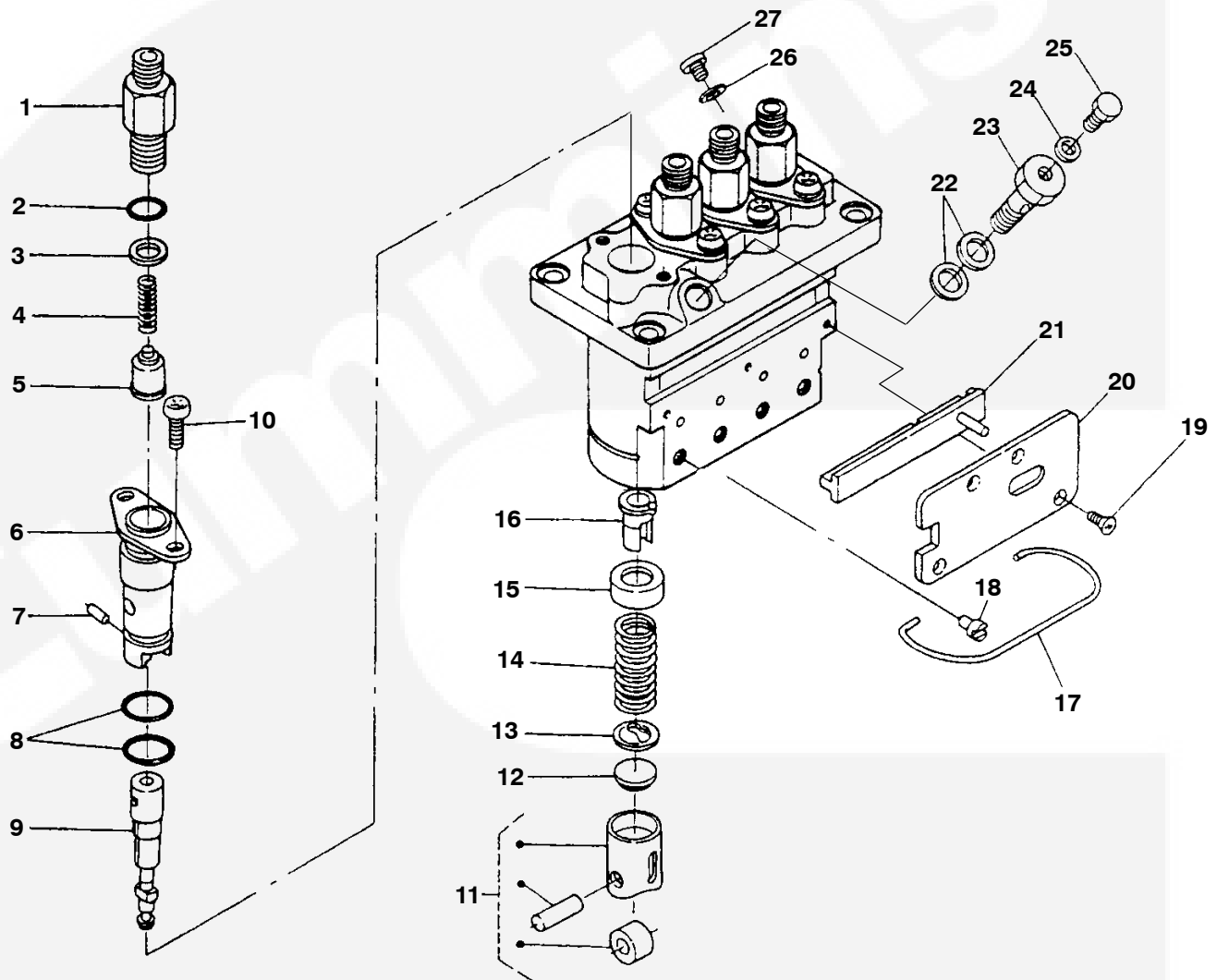
* - Parts Included in Fork Lever Assy.

Injection Pump (Spec A)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-5624	3	Stud	7	185-6586	1	Cap
2	185-6845	1	Shim, Injection Pump (.30mm)	8	185-6584	1	Joint, Eye
3			Shim, Injection Pump	9	185-6585	1	Collar, Eye Joint
			MDKBL	10	185-5623	32	Bolt, Hex Socket Head
	185-6749	AR	.20mm	11			Pump Assy, Injection (See
	185-6739	AR	.25mm				Separate Page for
			MDKBM, MDKBN				Components)
	185-6742	AR	.20mm		185-6882	1	MDKBL
	185-6743	AR	.25mm		185-6748	1	MDKBM, MDKBN
4	185-6759	86	Washer, Spring	12	185-4255	2	Nut
5	185-5625	32	Nut, Cap	13	185-5798	1	Cover
6	185-2578	1	Gasket	14	185-6580	1	Gasket

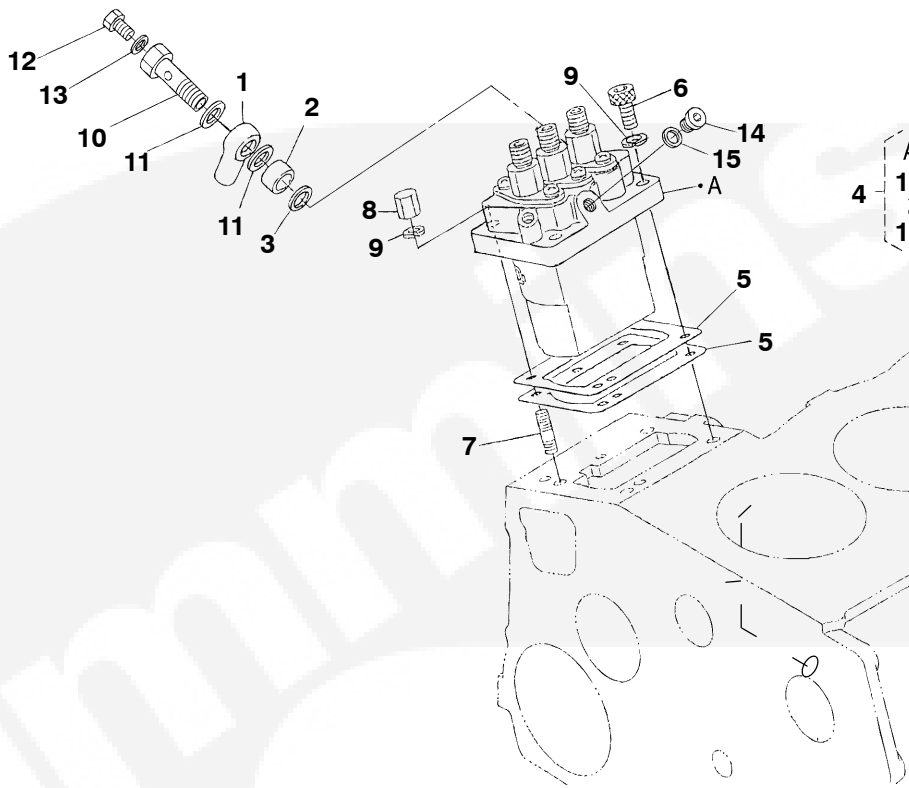
Injection Pump Components (Spec A)



Injection Pump Components (Spec A)

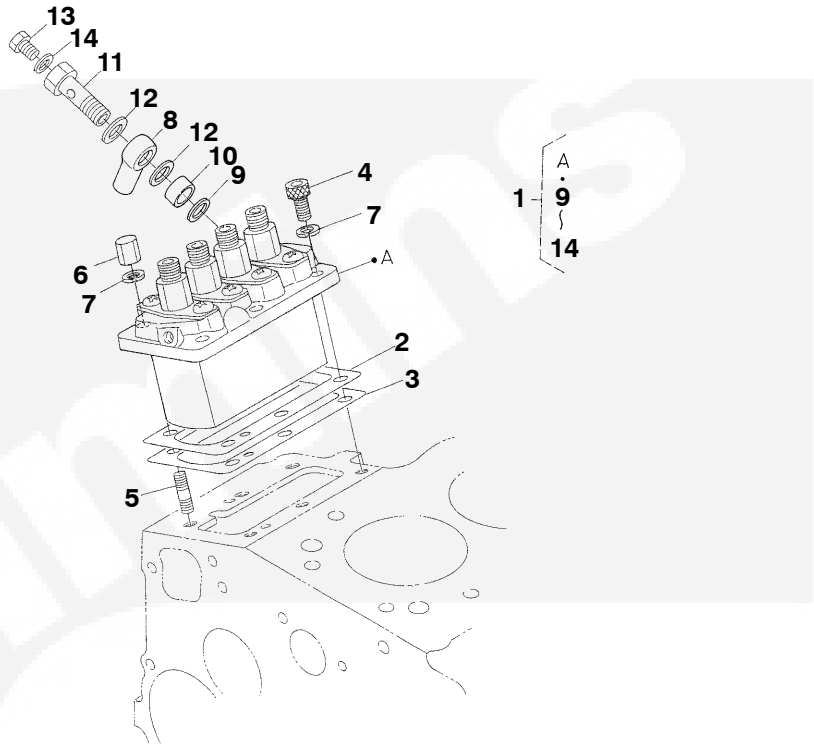
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			Pump Assy, Injection	12			Shim
	185-6882	1	MDKBL		185-5655	3	MDKBL
	185-6748	1	MDKBM, MDKBN		185-5655	4	MDKBM, MDKBN
1			Holder, Delivery Valve	13			Seat, Spring Lower
	185-6588	3	MDKBL		185-5654	3	MDKBL
	185-6588	4	MDKBM, MDKBN		185-5654	4	MDKBM, MDKBN
2			O'Ring	14			Spring, Plunger
	185-5643	3	MDKBL		185-5652	3	MDKBL
	185-5643	4	MDKBM, MDKBN		185-5652	4	MDKBM, MDKBN
3			Gasket, Delivery Valve	15			Seat, Spring Upper
	185-5641	3	MDKBL		185-5653	3	MDKBL
	185-5641	4	MDKBM, MDKBN		185-5653	4	MDKBM, MDKBN
4			Spring, Delivery Valve	16			Sleeve, Control
	185-5640	3	MDKBL		185-5659	3	MDKBL
	185-5640	4	MDKBM, MDKBN		185-5659	4	MDKBM, MDKBN
5			Valve, Delivery	17			Pin, Clamp
	185-5639	3	MDKBL		185-6707	1	MDKBL
	185-5639	4	MDKBM, MDKBN		185-6589	1	MDKBM, MDKBN
6			Flange, Sleeve	18			Pin, Tappet Guide
	185-5644	3	MDKBL		185-5650	3	MDKBL
	185-5644	4	MDKBM, MDKBN		185-5650	4	MDKBM, MDKBN
7			Pin, Joint	19			Screw, Countersunk Head
	185-5645	3	MDKBL		185-5658	4	MDKBL
	185-5645	4	MDKBM, MDKBN		185-5658	5	MDKBM, MDKBN
8			O'Ring	20			Plate
	185-5646	6	MDKBL		185-6886	1	MDKBL
	185-5646	8	MDKBM, MDKBN		185-7251	1	MDKBM, MDKBN
9			Plunger, Pump	21	185-6885	1	Rack, Control
	185-6884	3	MDKBL	22	185-5661	2	Gasket
	185-6884	4	MDKBM, MDKBN	23	185-6887	1	Bolt, Joint
10			Screw	24	185-5663	1	Gasket
	185-5647	6	MDKBL	25	185-5662	1	Screw, Air Bleed
	185-5647	8	MDKBM, MDKBN	26	185-5820	1	Gasket (MDKBL)
11			Tappet	27	185-6888	1	Plug (MDKBL)
	185-5649	3	MDKBL				
	185-5649	4	MDKBM, MDKBN				

Injection Pump (MDKBL Begin Spec B)



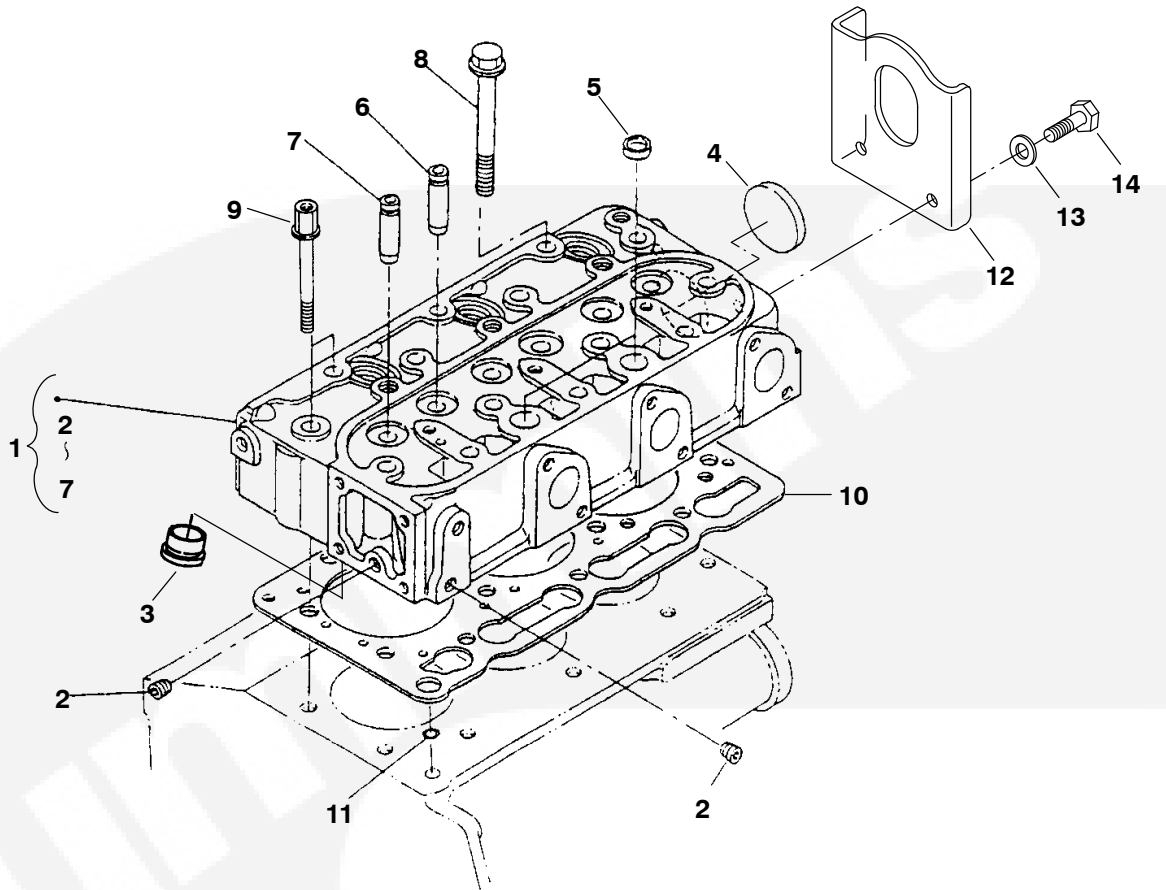
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-6584	1	Joint	7	185-5624	2	Stud
2	185-6585	1	Collar, Joint	8	185-5625	2	Nut
3	185-2578	1	Gasket	9	185-6759	4	Washer, Spring
4	185-6882	1	Assy., Pump Injection	10	185-6887	1	Bolt, Joint
5			Shim, Injection Pump	11	185-5661	2	Gasket
	185-6749	1	.20mm	12	185-5662	1	Screw
	185-6739	1	.25mm	13	185-5663	1	Gasket
	185-6845	1	.30mm	14	185-6888	1	Plug
6	185-5623	2	Bolt, Hex Socket Head	15	185-5823	1	Gasket

Injection Pump (MDKBM and MDKBN Begin Spec B)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-6748	1	Assy, Pump Injection	5	185-5624	3	Stud
2			Shim, Injection Pump Spec B-D	6	185-5625	3	Nut
	185-6742	1	.20mm	7	185-6759	6	Washer, Spring
	185-6743	1	.25mm	8	185-6584	1	Joint
			Begin Spec E	9	185-2578	1	Gasket
	147-0976	1	.20mm	10	185-6585	1	Collar, Joint
	147-0977	1	.25mm	11	185-6887	1	Bolt, Joint
3	185-6744	1	Shim, Injection Pump (.30mm)	12	185-5661	2	Gasket
4	185-5623	3	Bolt, Hex Head Socket	13	185-5662	1	Screw
				14	185-5663	1	Gasket

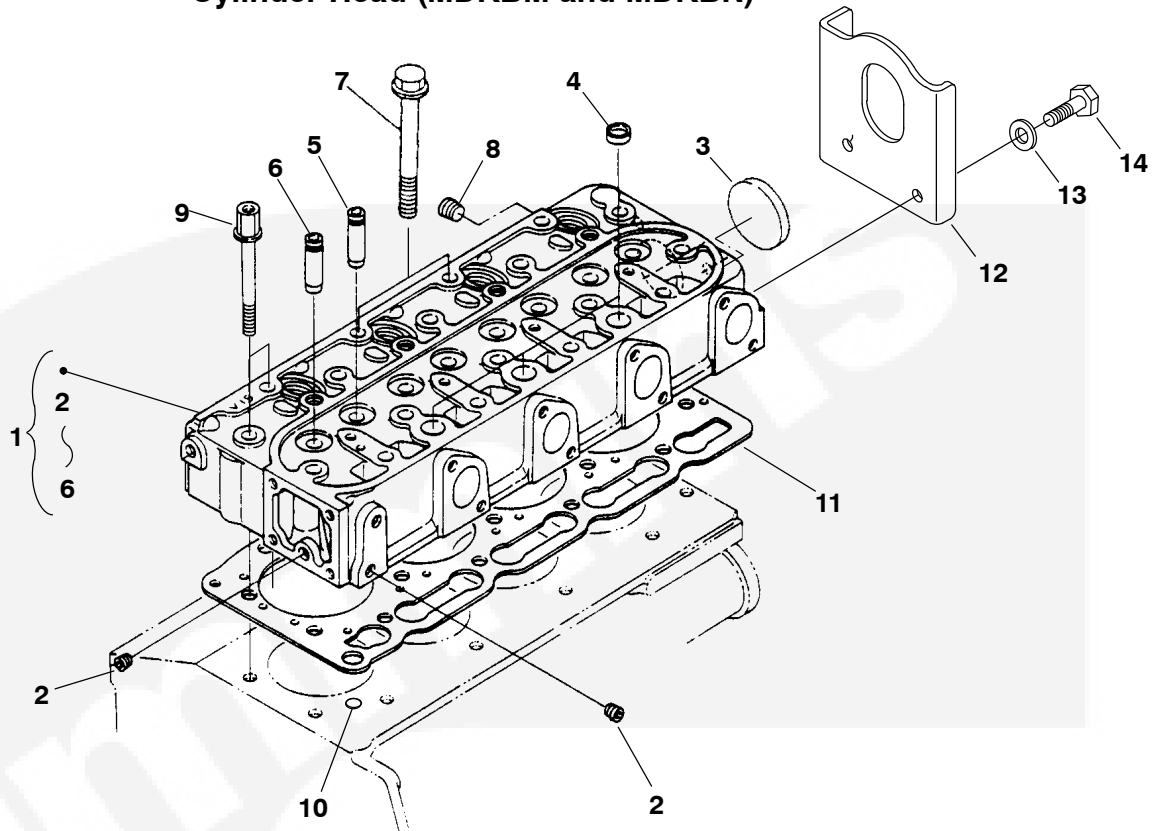
Cylinder Head (MDKBL)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Head Assy, Cylinder (Includes Parts Marked *)	7			*Guide, Inlet Valve
	185-7374	1	Spec A-D		185-6475	3	Spec A
	110-4092	1	Begin Spec E		110-3960	3	Begin Spec B
2	185-2188	2	*Plug	8	185-6477	12	Bolt, Cylinder Head
3	185-7375	3	*Chamber, Combustion (Spec A)	9	185-6479	2	Bolt, Cylinder Head
4	185-2411	1	*Cap, Sealing	10			Gasket, Cylinder Head
5	185-2413	2	*Cap, Sealing		185-7373	1	Spec A
6			*Guide, Exhaust Valve		181-9222	1	Begin Spec B
	185-6476	3	Spec A	11	185-2095	1	O'Ring (Spec A)
	181-9119	3	Begin Spec B	12	403-4284-04	1	Bracket, Lifting
				13	526-0399-60	2	Washer, Flat (M8)
				14	800-3017-18	2	Screw, Hex Head Cap (M8 x 1.25 x 16mm)

* - Parts Included in Cylinder Head Assy.

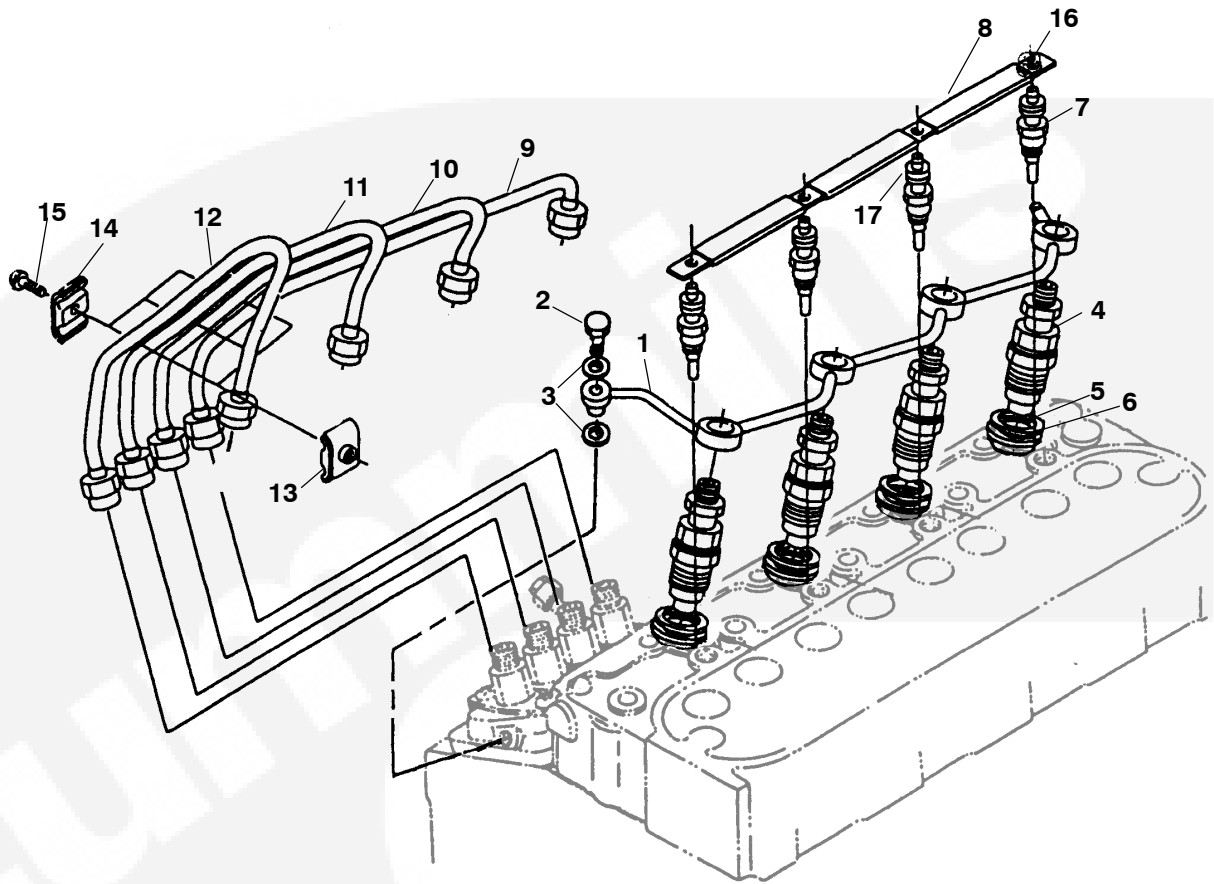
Cylinder Head (MDKBM and MDKBN)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Head Assy, Cylinder (Includes Parts Marked *)	8	185-5502	1	Plug (Spec A)
			Spec A-D	9	185-6479	2	Bolt, Cylinder Head
	185-6747	1	MDKBM	10	185-2095	1	O'Ring (Spec A)
	185-7303	1	MDKBN	11			Gasket, Cylinder Head MDKBM
			Begin Spec E		185-6478	1	Spec A
	110-4094	1	MDKBM and MDKBN		110-3967	1	Begin Spec B
2	185-2188	2	*Plug				MDKBN
3	185-2411	1	*Cap, Sealing		185-7304	1	Spec A
4			*Cap, Sealing		110-3965	1	Begin Spec B
	185-2413	3	MDKBM (Spec A-D)		110-3965	1	MDKBM and MDKBN
	185-2413	4	MDKBN (Spec A-D)				Begin Spec E
	185-2413	3	MDKBM and MDKBN (Begin Spec E)	12	403-4284-04	1	Bracket, Lifting
5			*Guide, Exhaust Valve	13	526-0399-60	2	Washer, Flat (M8)
	185-6476	4	Spec A	14	800-3017-18	2	Screw, Hex Head Cap (M8 x 1.25 x 16mm)
	181-9119	4	Begin Spec B				
6			*Guide, Inlet Valve				
	185-6475	4	Spec A				
	110-3960	4	Begin Spec B				
7	185-6477	16	Bolt, Cylinder Head				

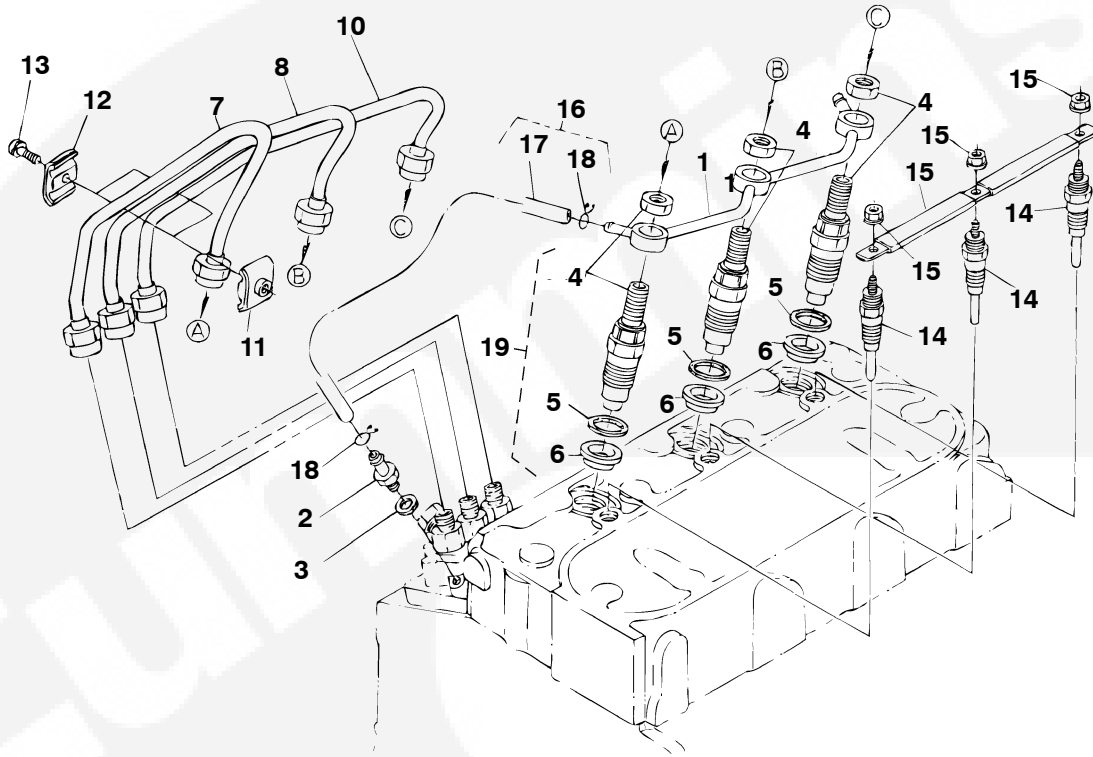
* - Parts Included in Cylinder Head Assy.

Nozzle Holder and Glow Plug (Spec A)



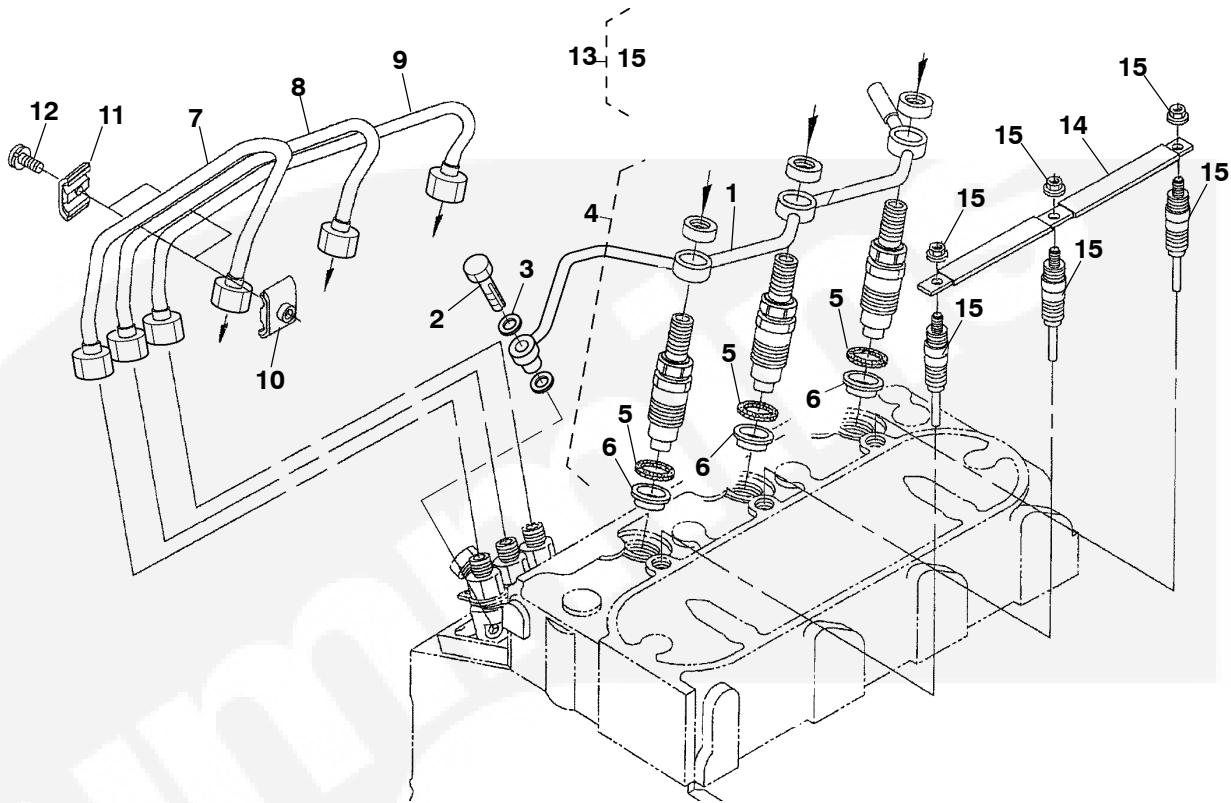
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7106	1	Pipe, Overflow MDKBL	8	185-6899	1	Cord, Glow Plug MDKBL
	185-7265	1	MDKBM, MDKBN		185-6624	1	MDKBM, MDKBN
2	185-7082	1	Screw, Air Bleeder	9	185-7266	1	Pipe, Injection (MDKBM, MDKBN)
3	185-2284	2	Gasket	10	185-6621	1	Pipe, Injection
4			Holder Assy, Nozzle (See Separate Page for Components)	11	185-6751	1	Pipe, Injection
	185-6740	3	MDKBL	12	185-6750	1	Pipe, Injection
	185-6740	4	MDKBM, MDKBN	13			Clamp, Pipe
5			Gasket		185-5612	2	MDKBL
	185-5337	3	MDKBL		185-5612	3	MDKBM, MDKBN
	185-5337	4	MDKBM, MDKBN	14			Clamp, Pipe
6			Seal, Heat		185-2345	2	MDKBL
	185-5985	3	MDKBL		185-2345	3	MDKBM, MDKBN
	185-5985	4	MDKBM, MDKBN	15			Screw, Washer Head
7			Plug, Glow		185-2385	2	MDKBL
			MDKBL		185-2385	3	MDKBM, MDKBN
	185-5421	3	12V	16			Nut, Flange
	185-7268	3	24V		185-5615	3	MDKBL
			MDKBM, MDKBN		185-5615	4	MDKBM, MDKBN
	185-5421	4	12V	17			Washer, Plain
	185-7268	4	24V		185-7004	3	MDKBL
					185-7004	4	MDKBM, MDKBN

Nozzle Holder and Glow Plug (MDKBL Spec B-D)



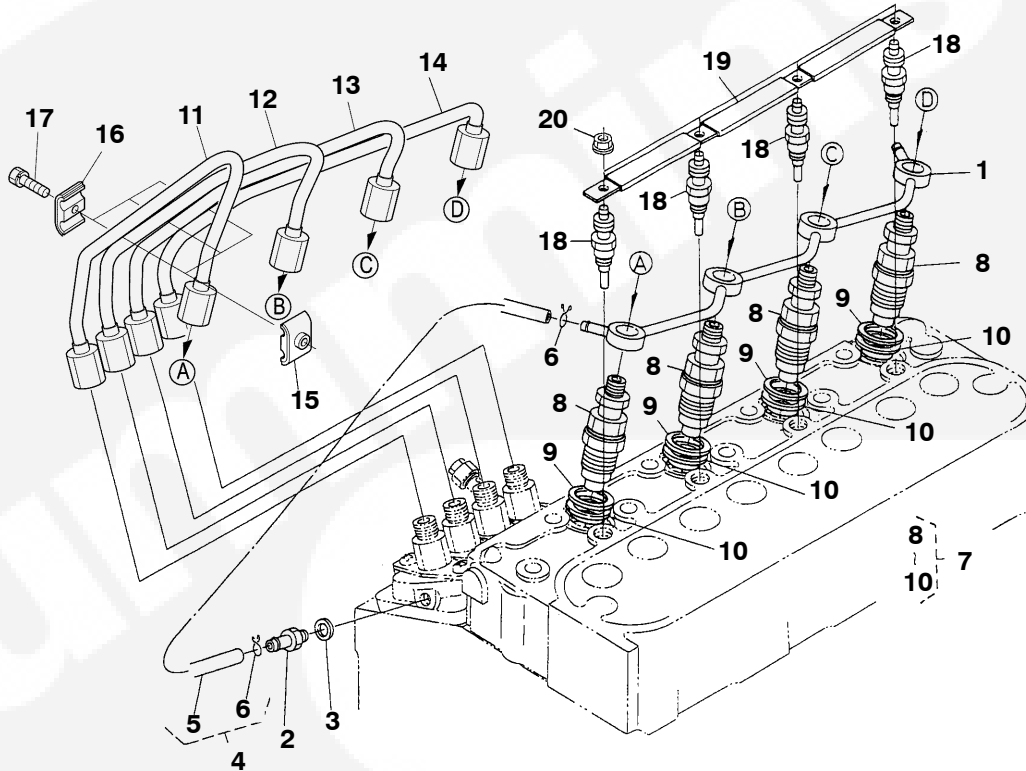
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-6896	1	Assy. Pipe, Overflow	11	185-2345	2	Clamp, Pipe
2	185-5609	1	Screw, Air Bleeder	12	185-2385	2	Screw, with Washer
3	185-2284	1	Gasket	13			Glow Plug
4	185-6740	3	Assy. Holder, Nozzle (See Separate Page for Components)		333-0802	3	12V
5	185-5337	3	Gasket		185-7268	3	24V
6	185-5985	3	Seal, Heat	14	185-6899	1	Cord, Glow Plug
7	185-6750	1	Pipe, Injection	15	185-5615	3	Nut, Flange
8	185-6751	1	Pipe, Injection	16	185-5607	1	Assy, Pipe Overflow
9	185-6897	1	Pipe, Injection	17	181-9055	1	Pipe, Fuel Overflow
10	185-5612	2	Clamp, Pipe	18	185-5608	2	Clip, Pipe
				19	147-0924	1	Kit, Holder Nozzle

Nozzle Holder and Glow Plug (MDKBL Begin Spec E)



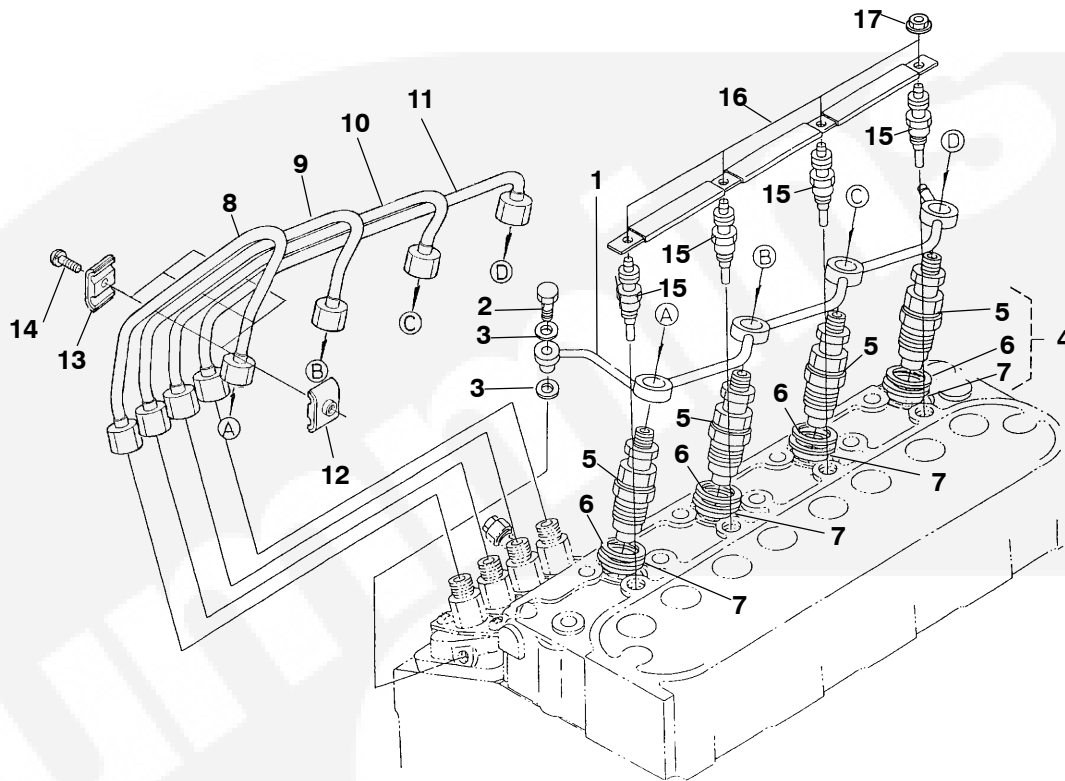
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-7106	1	Assy. Pipe, Overflow	9	185-6897	1	Pipe, Injection
2	185-7082	1	Screw, Air Bleeder	10	185-5612	2	Clamp, Pipe
3	185-2284	2	Gasket	11	185-2345	2	Clamp, Pipe
4	147-0978	3	Assy. Holder, Nozzle (See Separate Page for Components)	12	185-2385	2	Screw, with Washer
5	185-5337	3	Gasket	13	333-0802	3	Glow Plug 12V
6	185-5985	3	Seal, Heat		185-7268	3	Glow Plug 24V
7	185-6750	1	Pipe, Injection	14	185-6899	1	Cord, Glow Plug
8	185-6751	1	Pipe, Injection	15	185-5615	3	Nut, Flange

Nozzle Holder and Glow Plug (MDKBM Spec B-D)



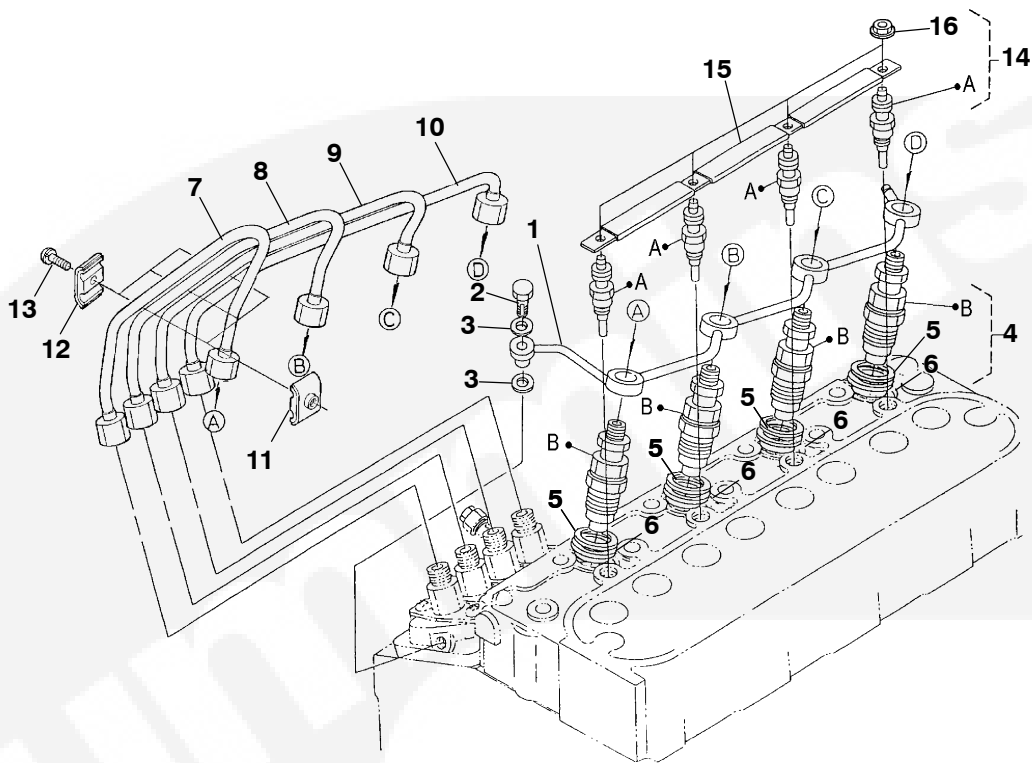
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-7404	1	Assy., Pipe Overflow	12	185-6751	1	Pipe, Injection
2	185-5609	1	Screw, Air Bleeder	13	185-6897	1	Pipe, Injection
3	185-2284	1	Gasket	14	185-7266	1	Pipe, Injection
4	185-5607	1	Pipe Assy, Overflow (Includes Clip)	15	185-5612	3	Clamp, Pipe
5	181-9055	1	Pipe, Overflow	16	185-2345	3	Clamp, Pipe
6	185-5608	2	Clip, Pipe	17	185-2385	3	Screw, W/Washer
7	147-0924	4	Kit, Holder Nozzle	18			Plug, Glow
8	185-6740	4	Holder, Nozzle		333-0802	4	12V
9	185-5337	4	Gasket		185-7268	4	24V
10	185-5985	4	Seal, Heat	19	185-6624	1	Cord, Glow Plug
11	185-6750	1	Pipe, Injection	20	185-5616	4	Nut, Flange

Nozzle Holder and Glow Plug (MDKBN Spec B-D)



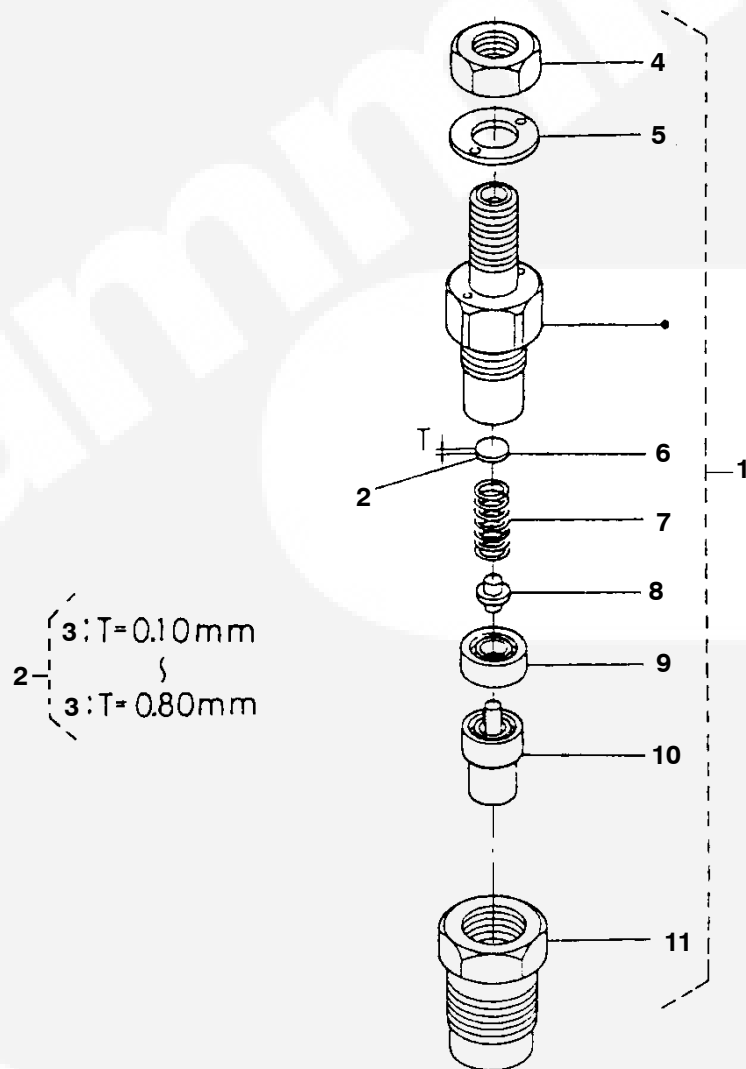
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7265	1	Assy Pipe, Overflow	11	185-7266	1	Pipe, Injection
2	185-7082	1	Screw, Air Bleeder	12	185-5612	3	Clamp, Pipe
3	185-2284	2	Gasket	13	185-2345	3	Clamp, Pipe
4	181-9090	4	Kit Holder Nozzle	14	185-2385	3	Screw, Washer Head
5	185-6740	4	Assy. Holder, Nozzle	15			Glow, Plug
6	185-5337	4	Gasket		333-0802	4	12V
7	185-5985	4	Seal, Heat		185-7268	4	24V
8	185-6750	1	Pipe, Injection	16	185-6624	1	Cord Glow, Plug
9	185-6751	1	Pipe, Injection	17	185-5615	4	Nut, Flange
10	185-6897	1	Pipe, Injection				

Nozzle Holder and Glow Plug (MDKBM and MDKBN Begin Spec E)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7265	1	Assy Pipe, Overflow	10	185-7266	1	Pipe, Injection
2	185-7082	1	Screw, Air Bleeder	11	185-5612	3	Clamp, Pipe
3	185-2284	2	Gasket	12	185-2345	3	Clamp, Pipe
4	147-0978	4	Kit Holder, Nozzle	13	185-2385	3	Screw, with Washer
5	185-5337	4	Gasket	14			Plug, Glow
6	185-5985	4	Seal, Heat		333-0802	4	12V
7	185-6750	1	Pipe, Injection		185-7268	4	24V
8	185-6751	1	Pipe, Injection	15	185-6624	1	Cord, Glow Plug
9	185-6897	1	Pipe, Injection	16	185-5615	4	Nut, Flange

Nozzle Holder Components

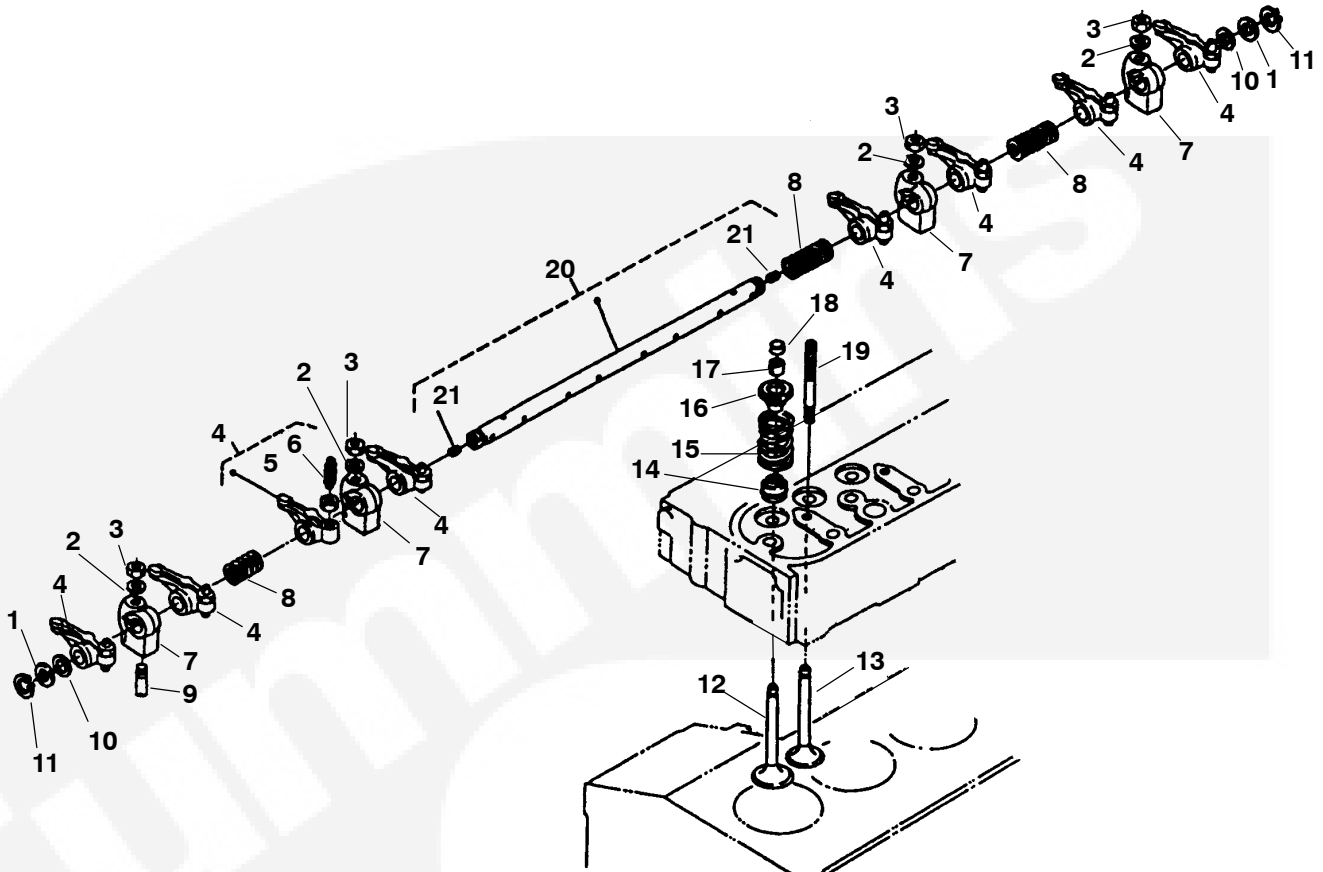


Nozzle Holder Components

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Holder Assy, Nozzle (Includes Parts Marked *)	4			*Nut
	185-6740	3	MDKBL Spec A-D		185-6900	3	MDKBL
	185-6740	4	MDKBM, MDKBN Spec A-D		185-6900	4	MDKBM, MDKBN
	147-0978	4	MDKBL, MDKBM, MDKBN Begin Spec E	5			*Washer, Plain
2			*Washer Assy, Adjust (Includes Adjusting Washers)		185-6906	3	MDKBL
	185-6908	3	MDKBL		185-6906	4	MDKBM, MDKBN
	185-6908	4	MDKBM, MDKBN	6			*Washer, Adjusting
3			Washer, Adjusting MDKBL		185-6901	3	MDKBL
	185-6909	3	.10mm		185-6901	4	MDKBM, MDKBN
	185-6910	3	.20mm	7			*Spring, Nozzle
	185-6911	3	.30mm		185-6902	3	MDKBL
	185-6912	3	.40mm		185-6902	4	MDKBM, MDKBN
	185-6913	3	.50mm	8			*Rod, Push
	185-6914	3	.52mm		185-6904	3	MDKBL
	185-6915	3	.54mm		185-6904	4	MDKBM, MDKBN
	185-6916	3	.56mm	9			*Piece, Distance
	185-6917	3	.58mm		185-6903	3	MDKBL
	185-6918	3	.80mm		185-6903	4	MDKBM, MDKBN
			MDKBM, MDKBN	10			*Piece, Nozzle
	185-6909	4	.10mm		185-6907	3	MDKBL Spec A-D
	185-6910	4	.20mm		147-0974	3	MDKBL Begin Spec E
	185-6911	4	.30mm		185-6907	4	MDKBM, MDKBN Spec A-D
	185-6912	4	.40mm		147-0974	4	MDKBM, MDKBN Begin Spec E
	185-6913	4	.50mm	11			*Nut, Nozzle*
	185-6914	4	.52mm		185-6905	3	MDKBL
	185-6915	4	.54mm		185-6905	4	MDKBM, MDKBN
	185-6916	4	.56mm				
	185-6917	4	.58mm				
	185-6918	4	.80mm				

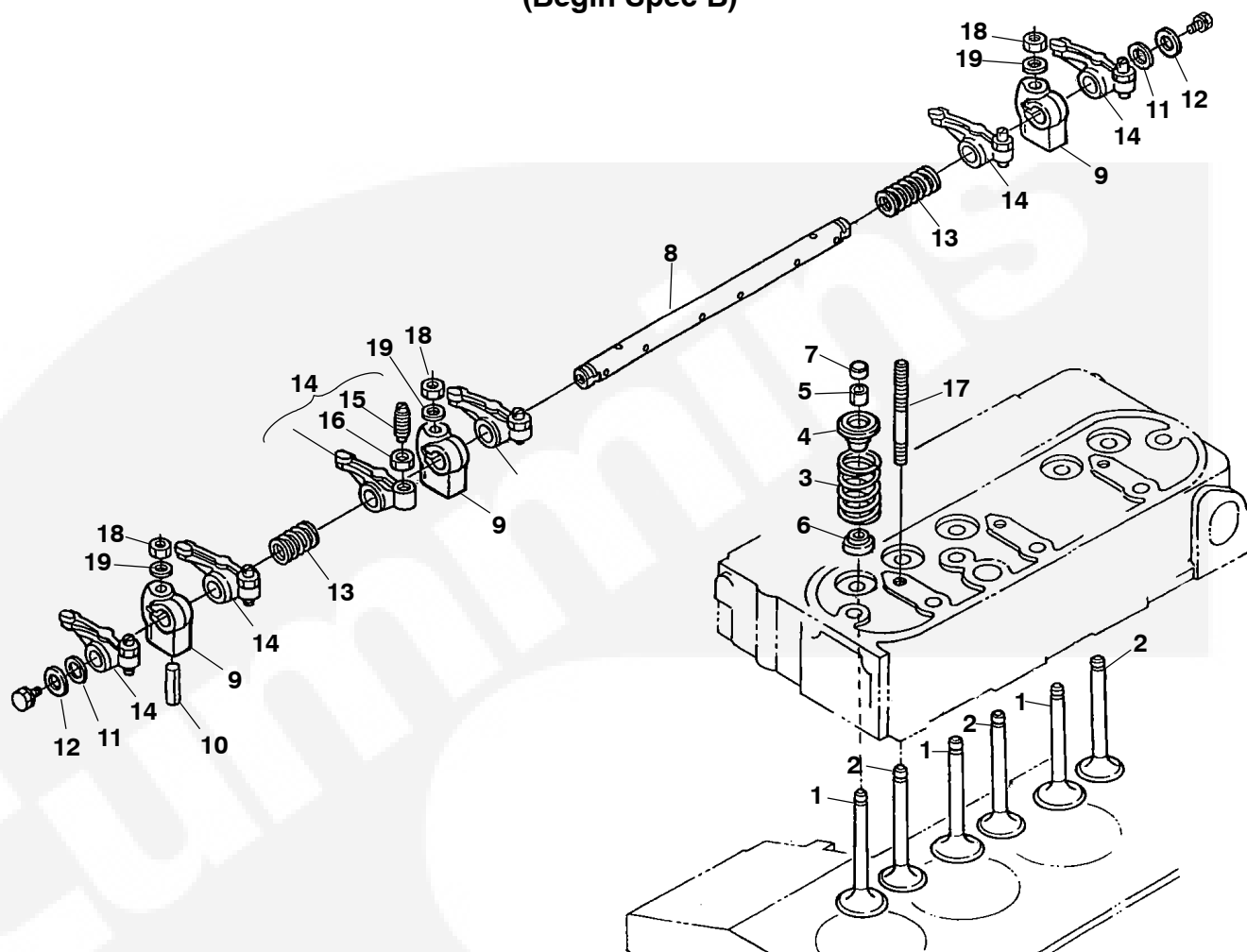
* – Parts Included in Nozzle Holder Assy.

Valve and Rocker Arm (Spec A)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-6690	2	Washer, Rocker Arm Shaft	13			Valve, Exhaust
2			Washer, Plain	185-6682	3		MDKBL
	185-2184	3	MDKBL	185-6682	4		MDKBM, MDKBN
	185-2184	4	MDKBM, MDKBN	14			Seal, Valve Stem
3			Nut	185-7300	6		MDKBL
	185-2179	3	MDKBL	185-7300	8		MDKBM, MDKBN
	185-2179	4	MDKBM, MDKBN	15			Spring, Valve
4			Arm Assy, Rocker (Includes Screw and Nut)	185-6683	6		MDKBL
	185-6693	6	MDKBL	185-6683	8		MDKBM, MDKBN
	185-6693	8	MDKBM, MDKBN	16			Retainer, Valve Spring
5			Nut	185-2076	6		MDKBL
	185-6695	6	MDKBL	185-2076	8		MDKBM, MDKBN
	185-6695	8	MDKBM, MDKBN	17			Collet, Valve Spring
6			Screw, Adjusting	110-3827	6		MDKBL
	185-6694	6	MDKBL	110-3827	8		MDKBM, MDKBN
	185-6694	8	MDKBM, MDKBN	18			Cap, Valve
7			Bracket, Rocker Arm	185-2080	6		MDKBL
	185-6687	3	MDKBL	185-2080	8		MDKBM, MDKBN
	185-6687	4	MDKBM, MDKBN	19			Stud
8			Spring, Rocker Arm	185-6688	3		MDKBL
	185-6691	2	MDKBL	185-6688	4		MDKBM, MDKBN
	185-6691	3	MDKBM, MDKBN	20			Shaft Assy, Rocker Arm (Includes Screws)
9	185-2072	1	Screw, Rocker Arm Set	185-6923	1		MDKBL
10	185-6689	2	Washer, Rocker Arm Shaft	185-6685	1		MDKBM, MDKBN
11	185-6692	2	Circlip, External	21	185-6686	2	Screw, Set
12			Valve, Inlet				
	185-6681	3	MDKBL				
	185-6681	4	MDKBM, MDKBN				

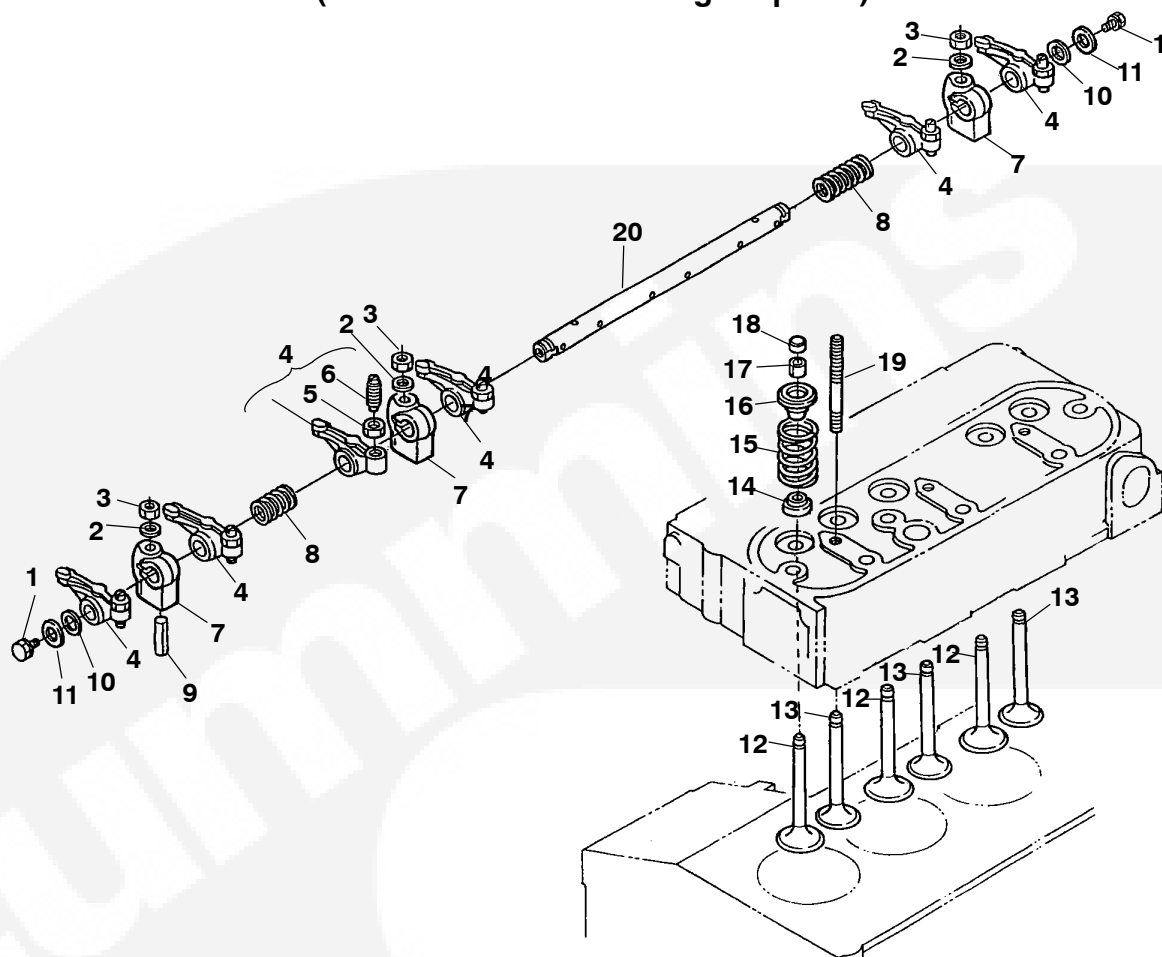
Valve and Rocker Arm MDKBL (Begin Spec B)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-6681	3	Valve, Inlet Spec B-D
	110-4021	3	Begin Spec E
2	185-6682	3	Valve, Exhaust Spec B-D
	110-4022	3	Begin Spec E
3	185-6683	6	Spring, Valve
4	110-3959	6	Retainer, Spring
5	181-9036	6	Collet, Valve Spring
6	185-7300	6	Seal, Valve Stem
7	185-6459	6	Cap, Valve
8	185-7439	1	Shaft, Rocker Arm

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
9	185-6697	3	Bracket, Rocker Arm
10	185-7441	1	Pin, Spring
11	185-6689	2	Washer, Rocker Arm Shaft
12	185-7395	2	Washer, Plain
13	185-6691	2	Spring, Rocker Arm
14	185-6693	6	Assy, Rocker Arm
15	185-6694	6	Screw, Adjusting
16	185-6695	6	Nut
17	185-6688	3	Stud
18	185-2179	3	Nut
19	185-2184	3	Washer, Plain

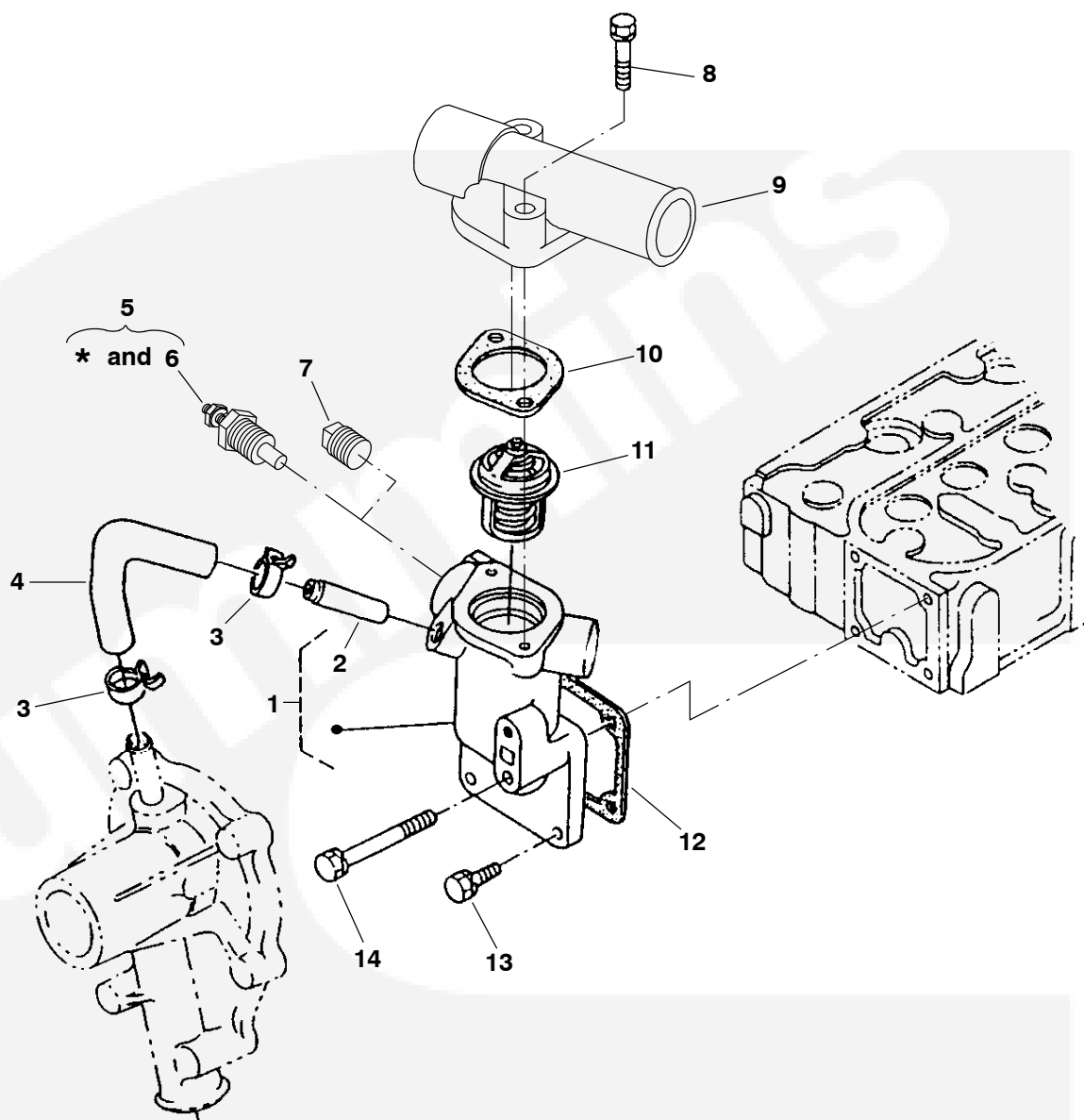
Valve and Rocker Arm (MDKBM and MDKBN Begin Spec B)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-7440	2	Bolt
2	185-2184	4	Washer, Plain
3	185-2179	4	Nut
4	185-6693	8	Arm Assy, Rocker (Includes Screw and Nut)
5	185-6695	8	Nut
6	185-6694	8	Screw, Adjusting
7	185-6687	4	Bracket, Rocker Arm
8	185-6691	3	Spring, Rocker Arm
9	185-7441	1	Pin, Spring
10	185-6689	2	Washer, Rocker Arm Shaft
11	185-7395	2	Washer, Plain
12			Valve, Inlet
	185-6681	4	Spec B-D
	110-4021	4	Begin Spec E

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
13			Valve, Exhaust
	185-6682	4	Spec B-D
	110-4022	4	Begin Spec E
14			Seal, Valve Stem
	185-7300	8	Spec B-D
	110-3974	8	Begin Spec E
15	185-6683	8	Spring, Valve
16	181-9117	8	Retainer, Spring
17	181-9036	8	Collet, Valve Spring
18	185-6459	8	Cap, Valve
19	185-6688	4	Stud
20	181-9100	1	Shaft, Rocker Arm

Water Flange



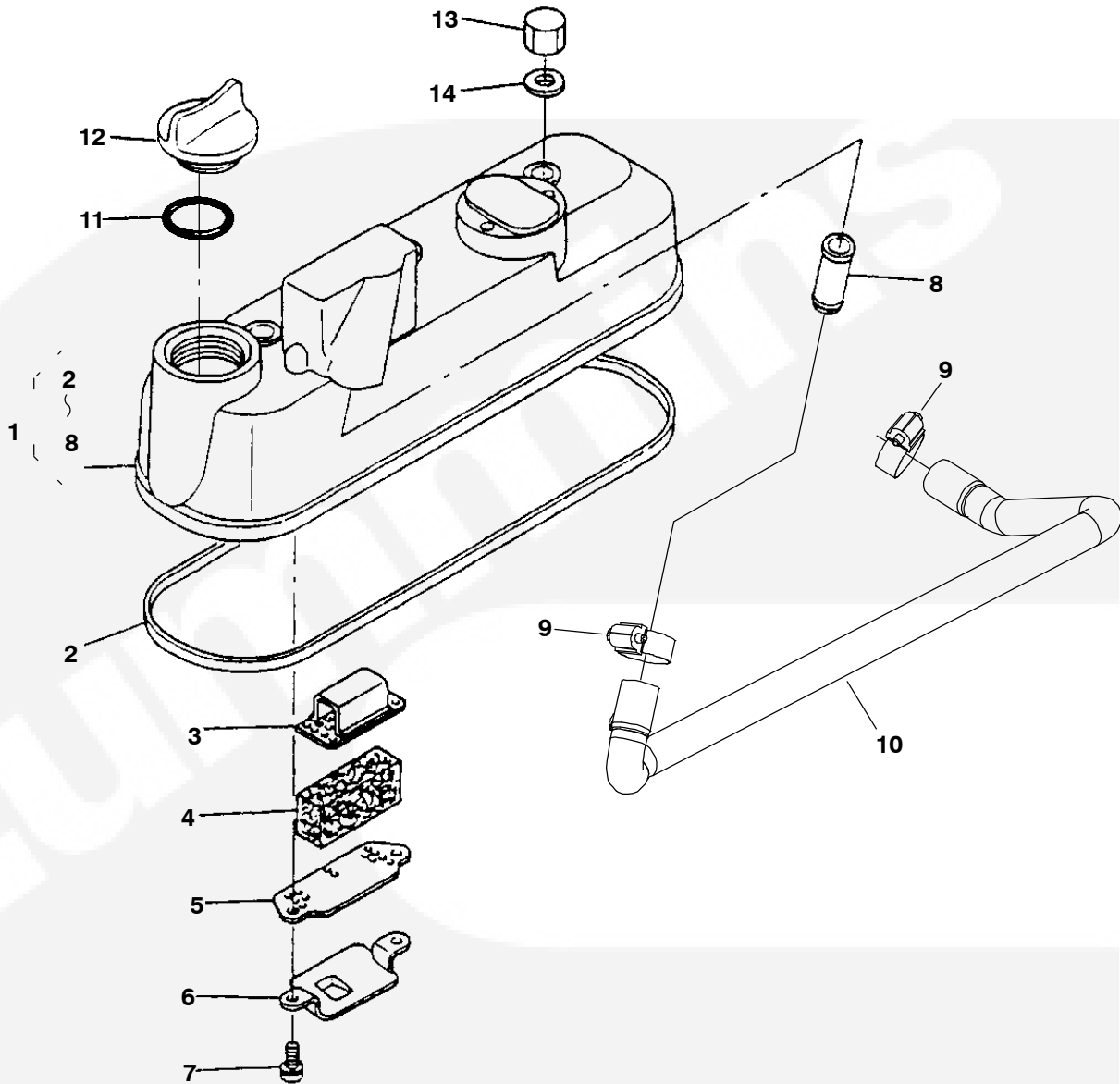
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7297	1	Flange, Water (Includes Water Return Pipe)
2	185-6445	1	Pipe, Water Return
3	185-6667	2	Band, Pipe
4	185-6666	1	Pipe, Water Return
5			*Kit, Sender (Includes Water Temperature Sender)
	300-5040	1	Negative Ground
	300-5041	1	Isolated Ground
6			Sender, Water Temperature (E2)
	193-0318	1	Negative Ground (B200, B201)
	193-0457-01	1	+ Isolated Ground (B380)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
7	185-5826	1	Plug
8	185-6781	2	Bolt
9	185-7298	1	Cover, Thermostat
10	185-6004	1	Gasket, Thermostat
11	185-6005	1	Thermostat
12	185-6922	1	Gasket, Water Flange
13	185-2388	3	Bolt
14	185-6665	1	Bolt

* - Kit Also Includes Oil Pressure Sender Listed on Oil System Page.

+ - Sender Included in Isolated Ground Kit Listed on Isolated Ground Page.

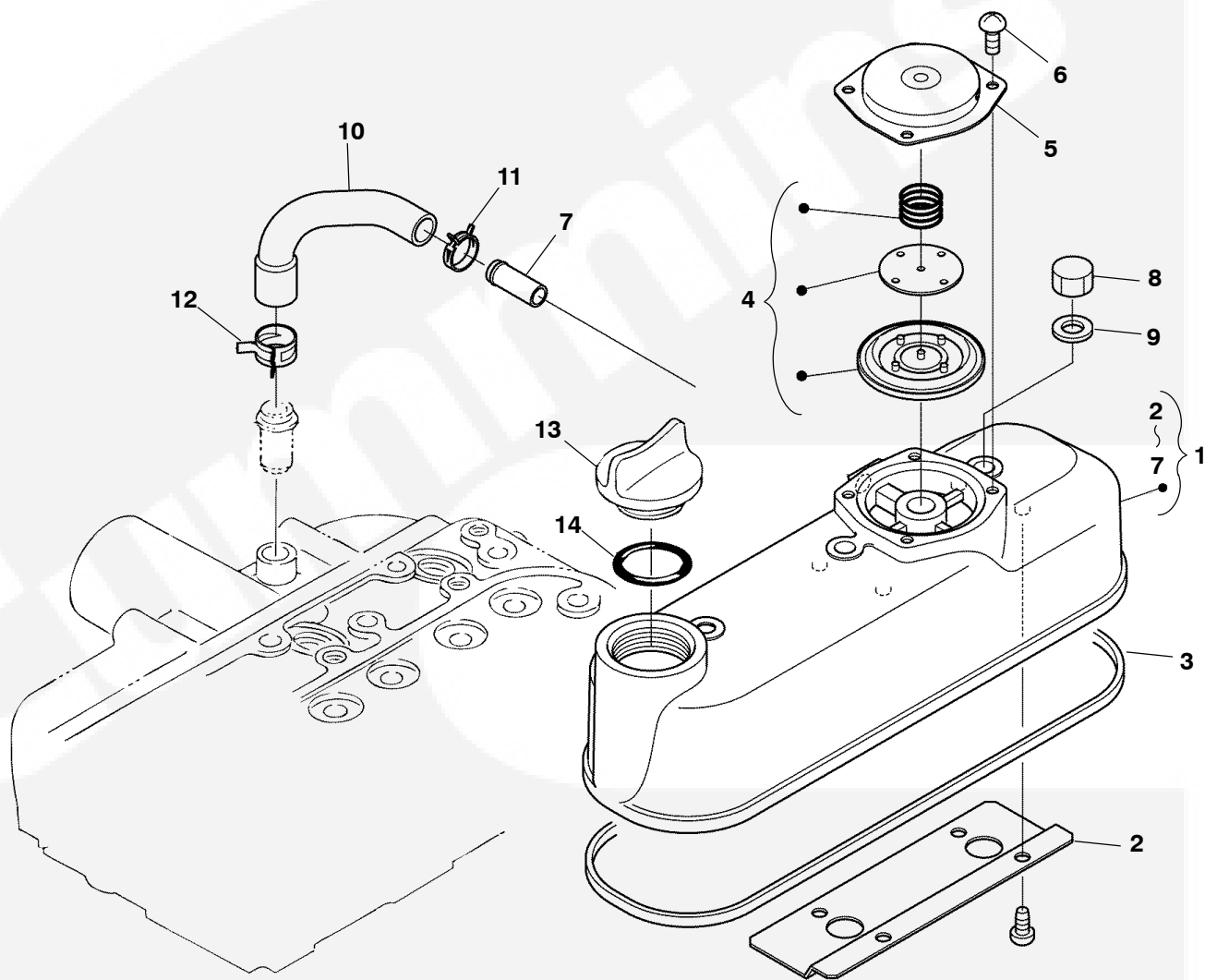
Cylinder Head Cover (Spec A)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Cover Assy, Cylinder Head (Includes Parts Marked *)	11			O'Ring
	185-6867	1	MDKBL		185-2349	1	MDKBL
	185-6497	1	MDKBM, MDKBN		185-2349	2	MDKBM, MDKBN
2			*Gasket, Cylinder Head Cover	12			Cover, Oil Fill
	185-6868	1	MDKBL		185-5407	1	MDKBL
	185-6498	1	MDKBM, MDKBN		185-5407	2	MDKBM, MDKBN
3	185-6501	1	*Plate, Upper Breather Element	13			Nut, Cap
4	185-6721	1	*Element, Breather		185-6394	3	MDKBL
5	185-6500	1	*Plate, Lower Breather Element		185-6394	4	MDKBM, MDKBN
6	185-6503	1	*Shield, Breather Oil	14			Gasket
7	185-2384	2	*Screw, Washer Head		185-2291	3	MDKBL
8	185-6499	1	*Joint, Breather Pipe		185-2291	4	MDKBM, MDKBN
9	503-0976	2	Clamp, Hose				
10			Hose, Breather				
	503-2070	1	MDKBL				
	503-2087	1	MDKBM, MDKBN				

* - Parts Included in Cylinder Head Cover Assy.

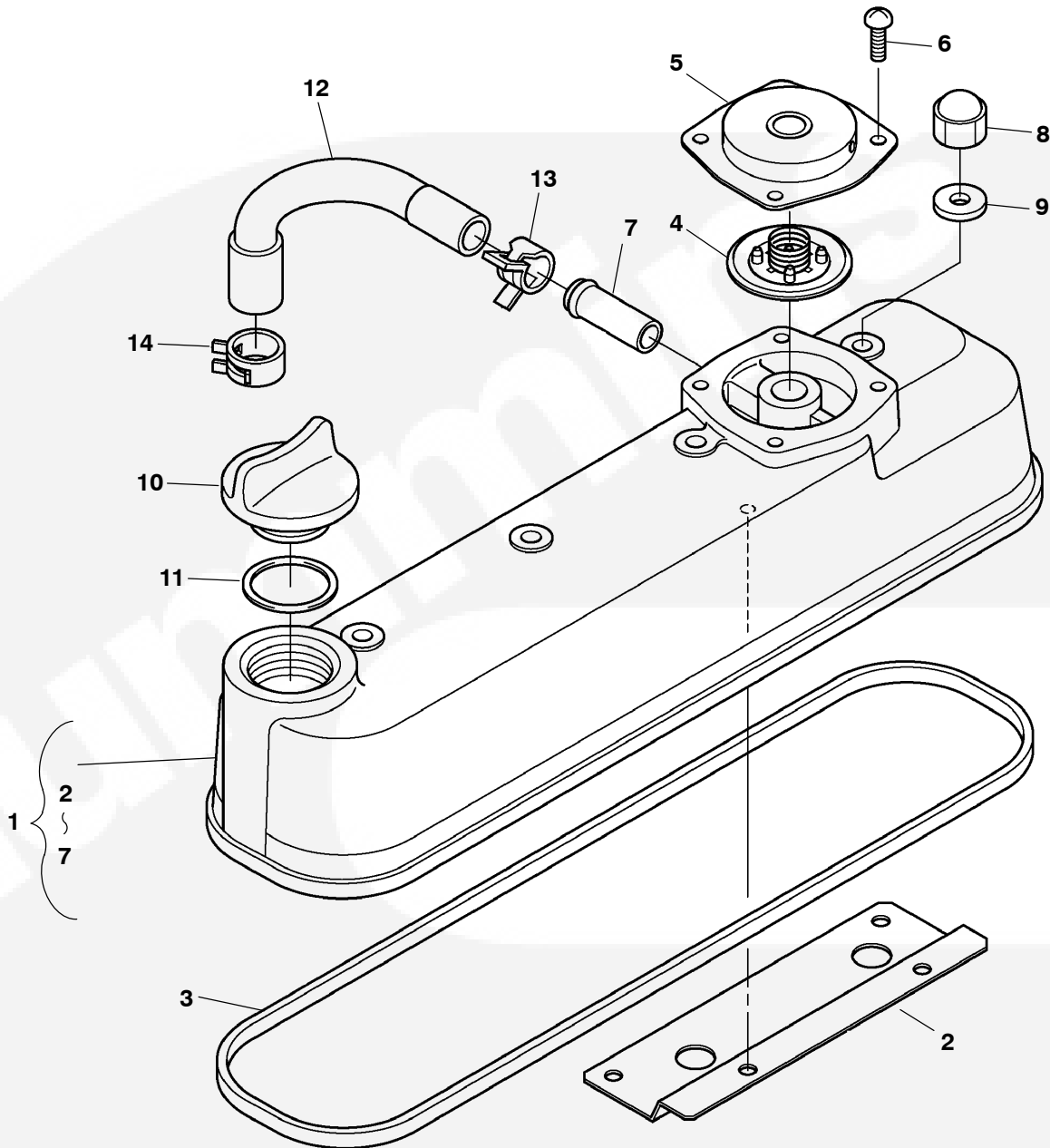
Cylinder Head Cover MDKBL (Begin Spec B)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Cover Assy, Cylinder Head (Includes Parts Marked *)	8	185-6394	3	*Nut
	134-5384	1	Begin Spec B	9	185-2291	3	Gasket
2	123-2298	1	Shield, Breather	10	181-9220	1	Tub, Breather
3	185-6868	1	*Gasket, Cylinder Head Cover	11	181-9109	1	Clamp, Hose
4	181-9240	1	*Comp. Valve, Breather	12	181-9025	1	Clamp, Hose
5	181-9238	1	*Cover, Breather	13	181-9000	1	Plug, Oil Filler
6	185-2384	4	*Screw, Pan Head	14	185-7426	1	O' Ring
7	185-6103	1	*Pipe, Water Return				

* - Parts Included in Cylinder Head Cover Assy.

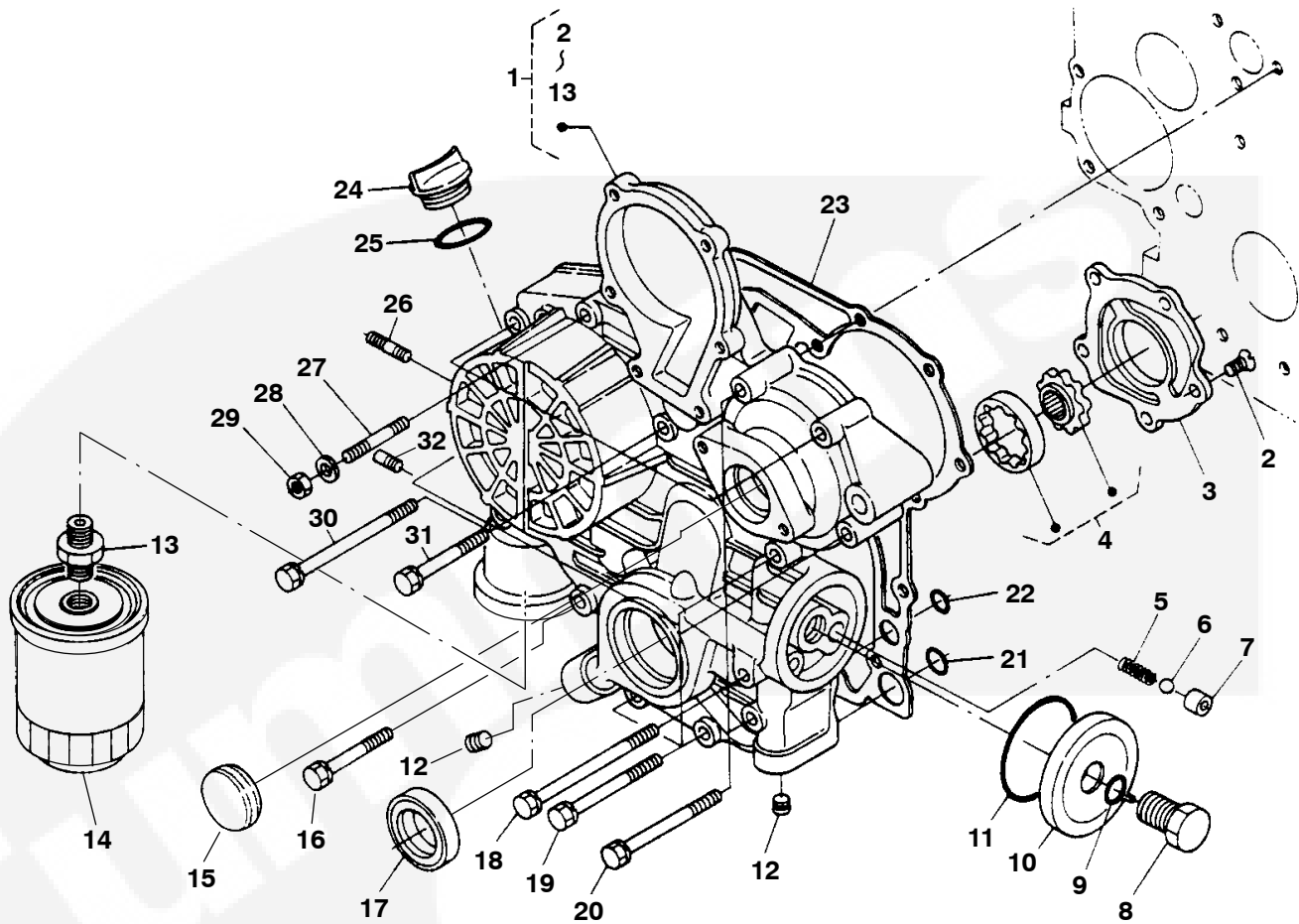
Cylinder Head Cover **MDKBM, MDKBN (Begin Spec B)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Cover Assy, Cylinder Head (Includes Parts Marked *)	11	185-7426	1	O' Ring
	134-5386	1	Begin Spec B	12	181-9220	1	Tub, Breather
2	123-2298	1	Shield, Breather	13	181-9109	1	Clamp, Hose
3	185-6498	1	*Gasket, Cylinder Head Cover	14	181-9025	1	Clamp, Hose
4	181-9240	1	*Comp. Valve, Breather				
5	181-9238	1	*Cover, Breather				
6	185-2384	4	*Screw, Pan Head				
7	181-9188	1	*Pipe, Water Return				
8			*Nut				
	185-6394	3	Spec B-D				
	181-9079	3	Begin Spec E				
9	185-2291	3	Gasket				
10	181-9000	1	Plug, Oil Filler				

* - Parts Included in Cylinder Head Cover Assy.

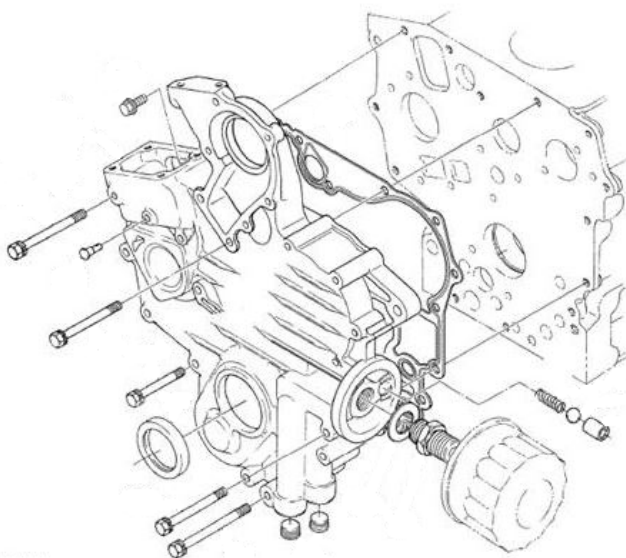
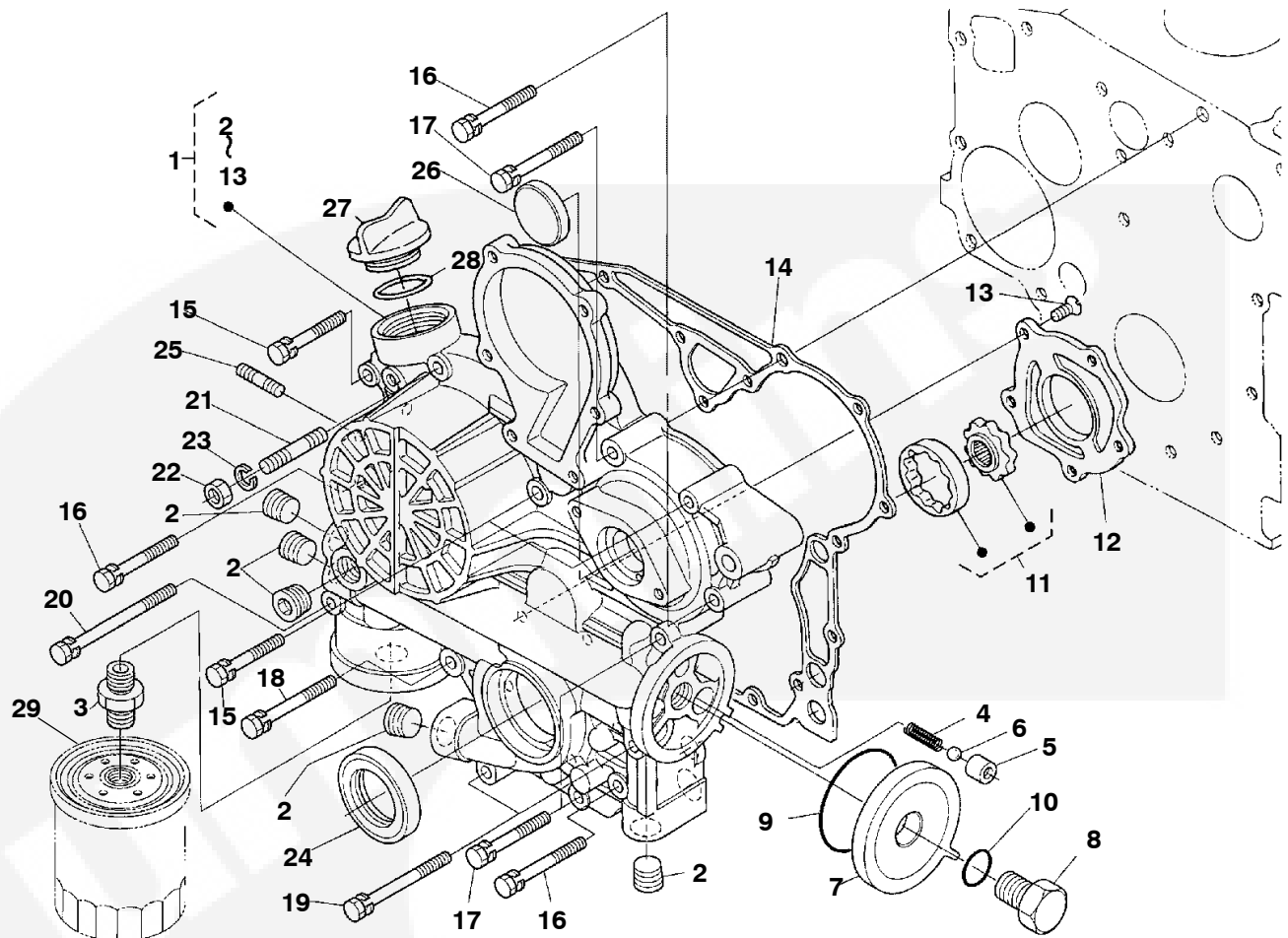
Gearcase (MDKBL, MDKBM and MDKBN Spec A-D)



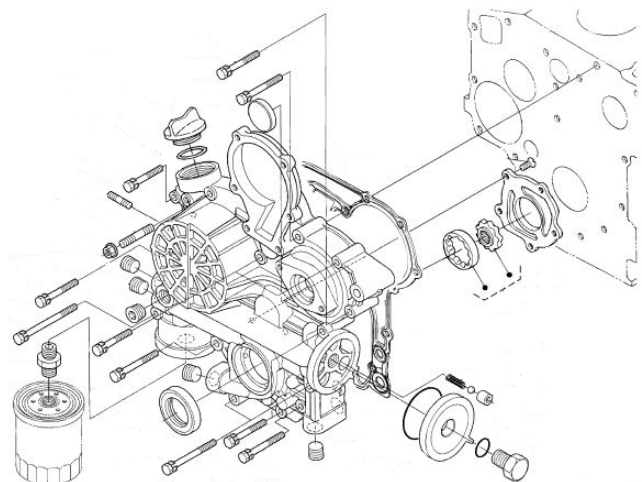
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Gearcase Assy (Includes Parts Marked *)	18	185-6491	2	Bolt
	185-6480	1	Spec A	19	185-7069	4	Bolt
	103-0858	1	Begin Spec B	20	185-6665	2	Bolt
			MDKBL	21	185-5869	2	O'Ring (Spec B)
	103-0861	1	Begin Spec B	22	185-3080	2	O'Ring (Spec B)
			MDKBM, MDKBN	23	185-6863	1	Gasket, Gearcase
2	185-6487	5	*Screw, Countersunk Head	24			Cover, Oil Fill
3	185-6486	1	*Cover, Oil Pump		185-5407	1	Spec A-B
4	185-6485	1	*Rotor, Oil Pump		123-2299		Spec C MDKBL
5	185-6482	1	*Spring	25	185-2349	1	O'Ring (MDKBL)
6	185-6484	1	*Ball	26			Stud
7	185-6483	1	*Seat, Valve		185-2359	1	Spec A
8	185-5742	1	*Bolt		185-7425	1	Begin Spec B
9	185-5869	1	*O'Ring	27			Stud
10	185-5741	1	*Cover		185-6493	2	Spec A
11	185-5743	1	*O'Ring		185-7423	2	Begin Spec B
12	185-6481	5	*Plug	28	185-6759	1	Washer, Spring
13	185-2124	1	*Fitting, Connector	29	185-4255	1	Nut
14	185-5835	1	Filter, Oil	30	185-6492	1	Bolt
15	185-7216	1	Plug	31	185-5833	3	Bolt
16	185-6490	1	Bolt	32	505-2252	1	Plug (MDKBM, MDKBN)
17			Seal, Oil				
	185-6864	1	MDKBL				
	185-6494	1	MDKBM, MDKBN				

* - Parts Included in Gearcase Assy.

Gearcase (MDKBL, MDKBM and MDKBN Begin Spec E)



NEW Gearcase

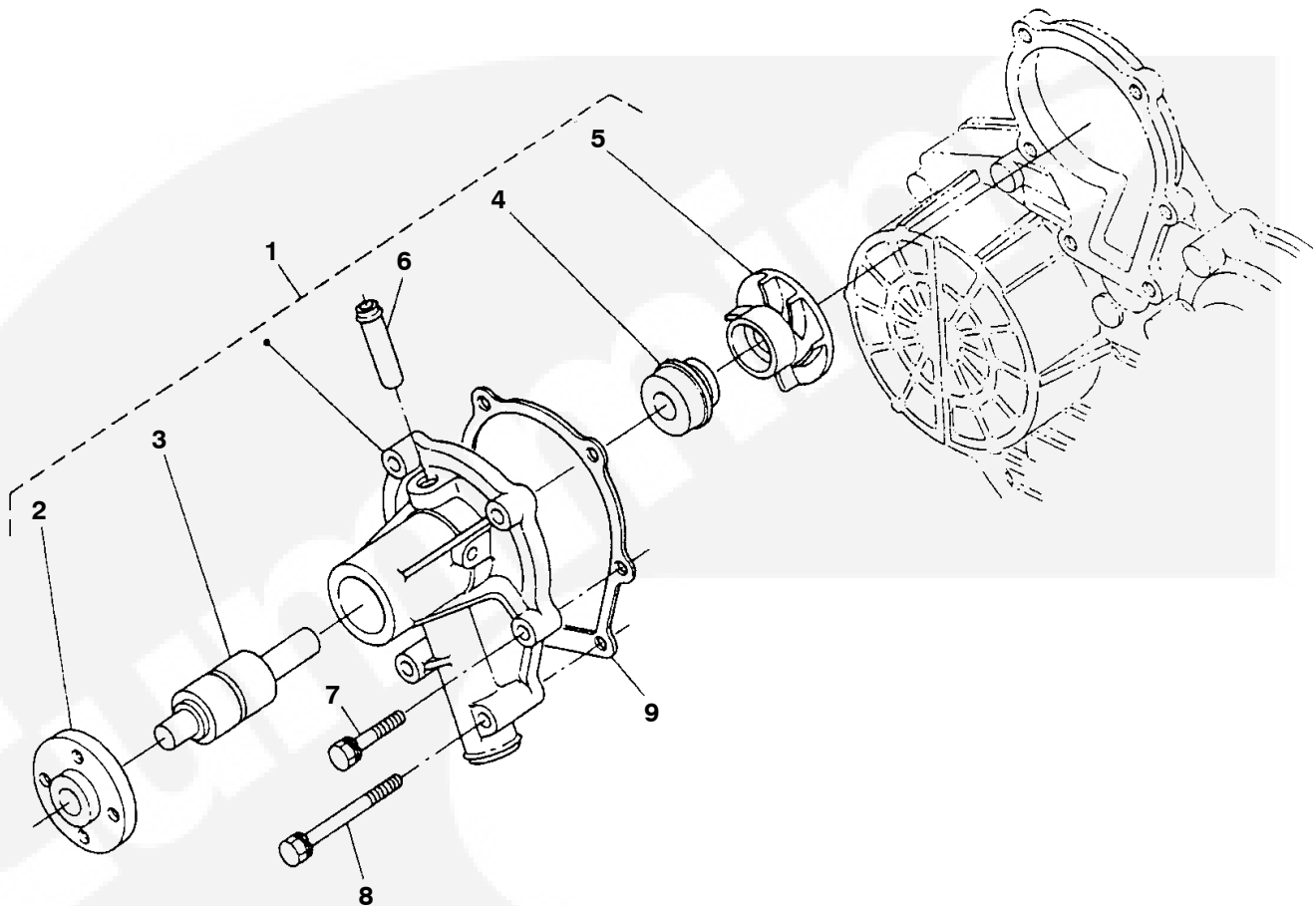


OLD Gearcase

Gearcase (MDKBL, MDKBM and MDKBN Begin Spec E)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	103-0861	1	Gearcase Assy (Includes Parts Marked *)	16	185-7069	4	Bolt
2	185-6481	4	*Plug	17	185-6489	2	Bolt
3	185-2124	1	*Joint, Pipe	18	184-0038	1	Bolt
4	185-6482	1	*Spring	19	185-6491	2	Bolt
5	185-6483	1	*Seat, Valve	20	185-6492	1	Bolt
6	185-6484	1	*Ball	21	185-7423	1	Stud
7	185-5741	1	*Cover	22	181-9013	1	Nut
8	185-5742	1	*Bolt	23	185-6759	1	Washer, Spring
9	181-9021	1	*O'Ring	24	185-6864	1	Seal, Oil
10	181-9019	1	*O'Ring	25	185-7425	2	Stud
11	185-6485	1	*Assy Rotor, Oil Pump	26	185-7216	1	Cover, Gear Case
12	185-6486	1	*Cover, Oil Pump	27	181-9000	1	Cover, Oil Fill
13	185-6487	5	*Screw, Counter Sunk Head	28	185-7426	1	O'Ring
14	185-6863	1	Gasket, Gear Case	29	185-5835	1	Filter, Oil
15	185-5833	3	Bolt	* - Parts Included in Gearcase Assy.			

Captive Water Pump Components

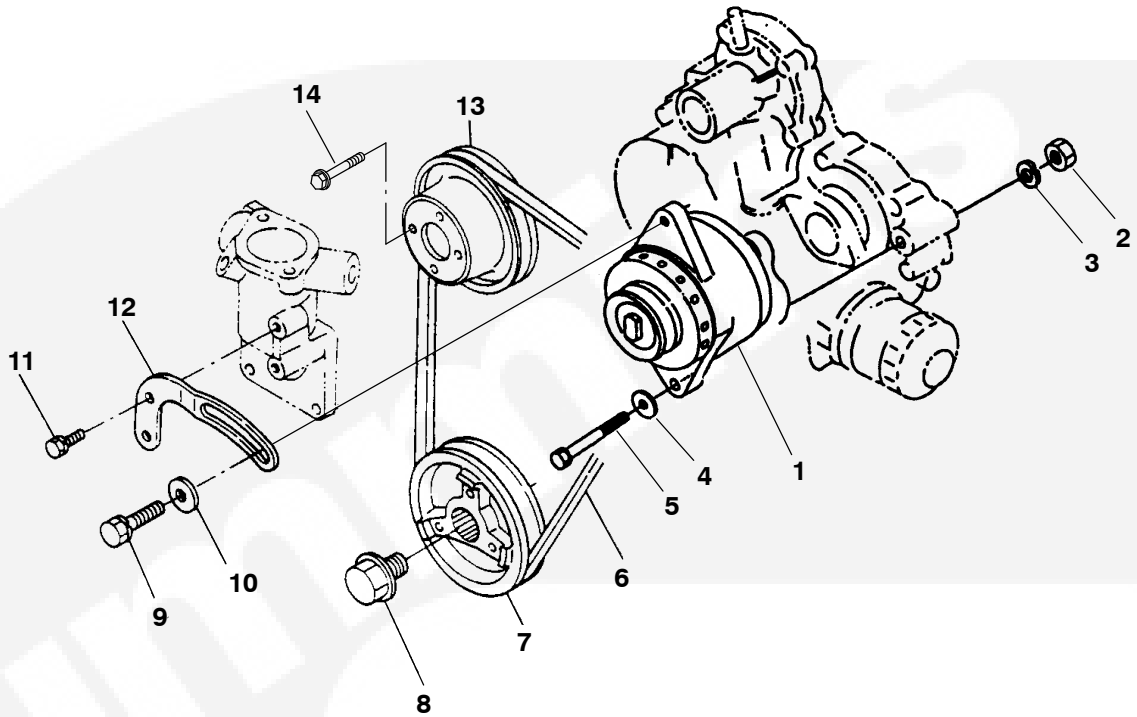


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Pump Assy, Water (Includes Parts Marked *)
	185-6671	1	Spec A
	181-9108	1	Begin Spec B
2	185-6672	1	*Flange, Pump Water
3			*Bearing
	185-6673	1	Spec A
	181-9116	1	Begin Spec B
4			*Seal Assy, Mechanical
	185-5714	1	Spec A
	181-9233	1	Begin Spec B

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
5			*Impeller, Captive Water Pump
	185-6674	1	Spec A
	181-9115	1	Begin Spec B
6	185-5716	1	*Pipe, Water Return
7	185-6677	4	Bolt
8			Bolt
	185-5745	2	Spec A
	181-9007	2	Begin Spec B
9	185-7299	1	Gasket, Water Pump

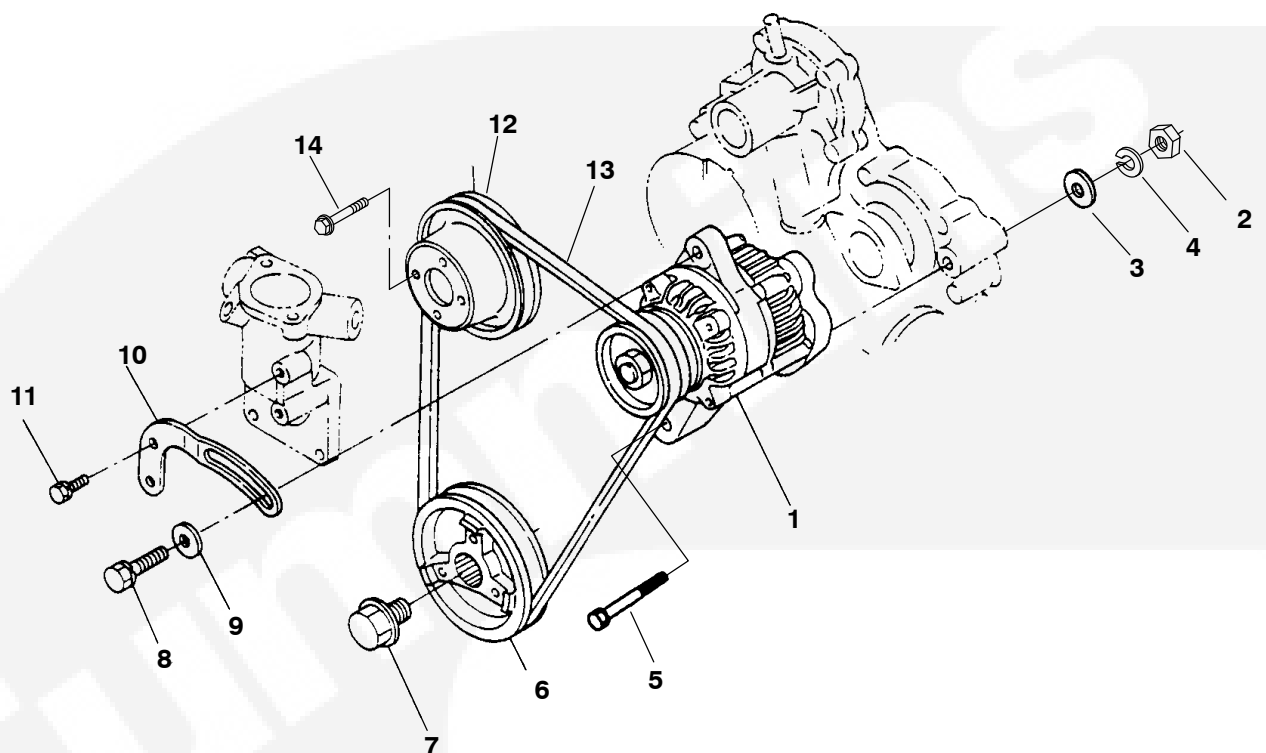
* - Parts Included in Water Pump Assy.

Alternator (12V)



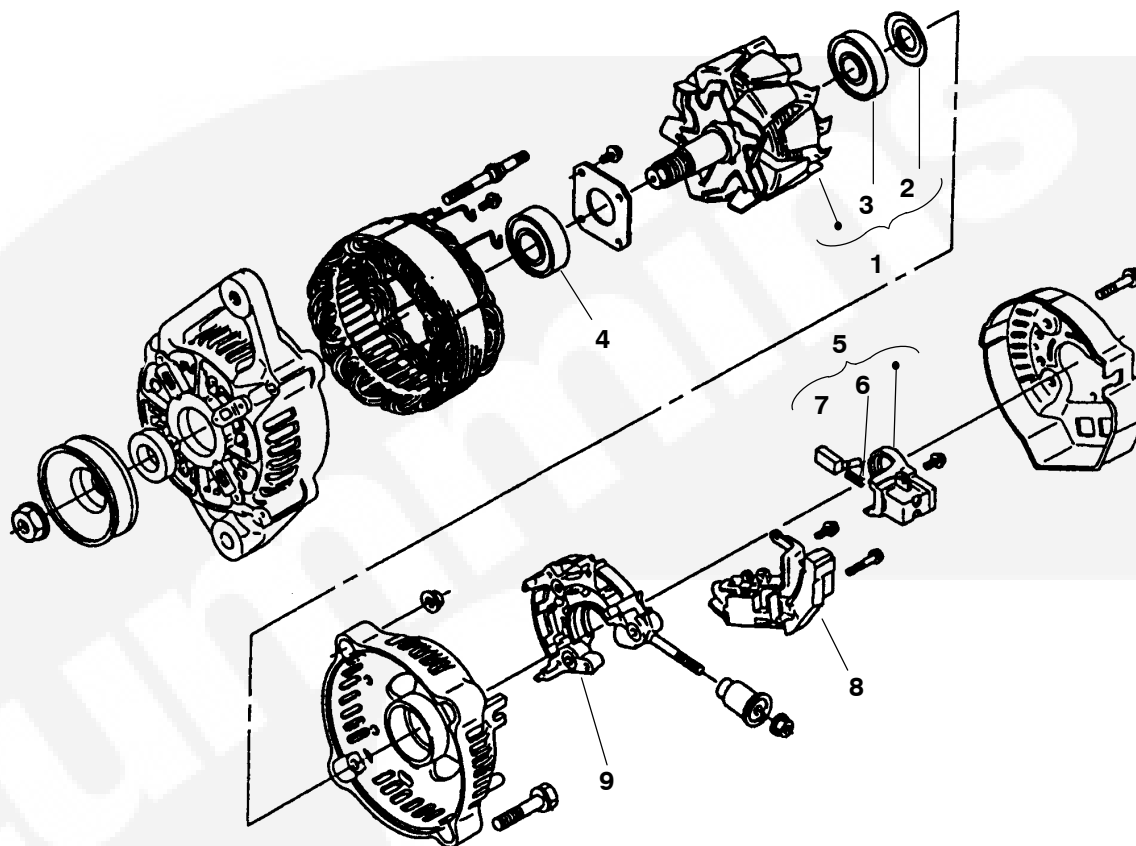
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7269	1	Alternator (12V) (No Components Available)	8	185-6633	1	Bolt
2	185-5445	1	Nut	9	185-2564	1	Bolt
3	185-6785	1	Washer, Spring	10	185-6786	2	Washer, Plain
4	185-7272	1	Washer, Plain	11	185-2388	1	Bolt
5	185-7271	1	Bolt	12	185-7270	1	Stay, Alternator
6	185-6934	1	Belt, Fan (37.5")	13	185-6631	1	Pulley, Fan
7			Pulley, Fan Drive	14	185-2572	4	Bolt
	185-6933	1	MDKBL				
	185-7273	1	MDKBM, MDKBN				

Alternator (24V)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7225	1	Alternator (24V)(See Separate Page for Components)	7	185-6633	1	Bolt
2	185-5445	1	Nut	8	185-2564	1	Bolt
3	185-6630	1	Washer, Plain	9	185-6786	1	Washer, Plain
4	185-6785	1	Washer, Spring	10	185-7226	1	Stay, Alternator
5	185-7227	1	Bolt	11	185-2388	1	Bolt
6			Pulley, Fan Drive	12	185-6631	1	Pulley, Fan
	185-6933	1	MDKBL	13	185-6934	1	Belt, Fan (37.5")
	185-7273	1	MDKBM, MDKBN	14	185-2572	4	Bolt

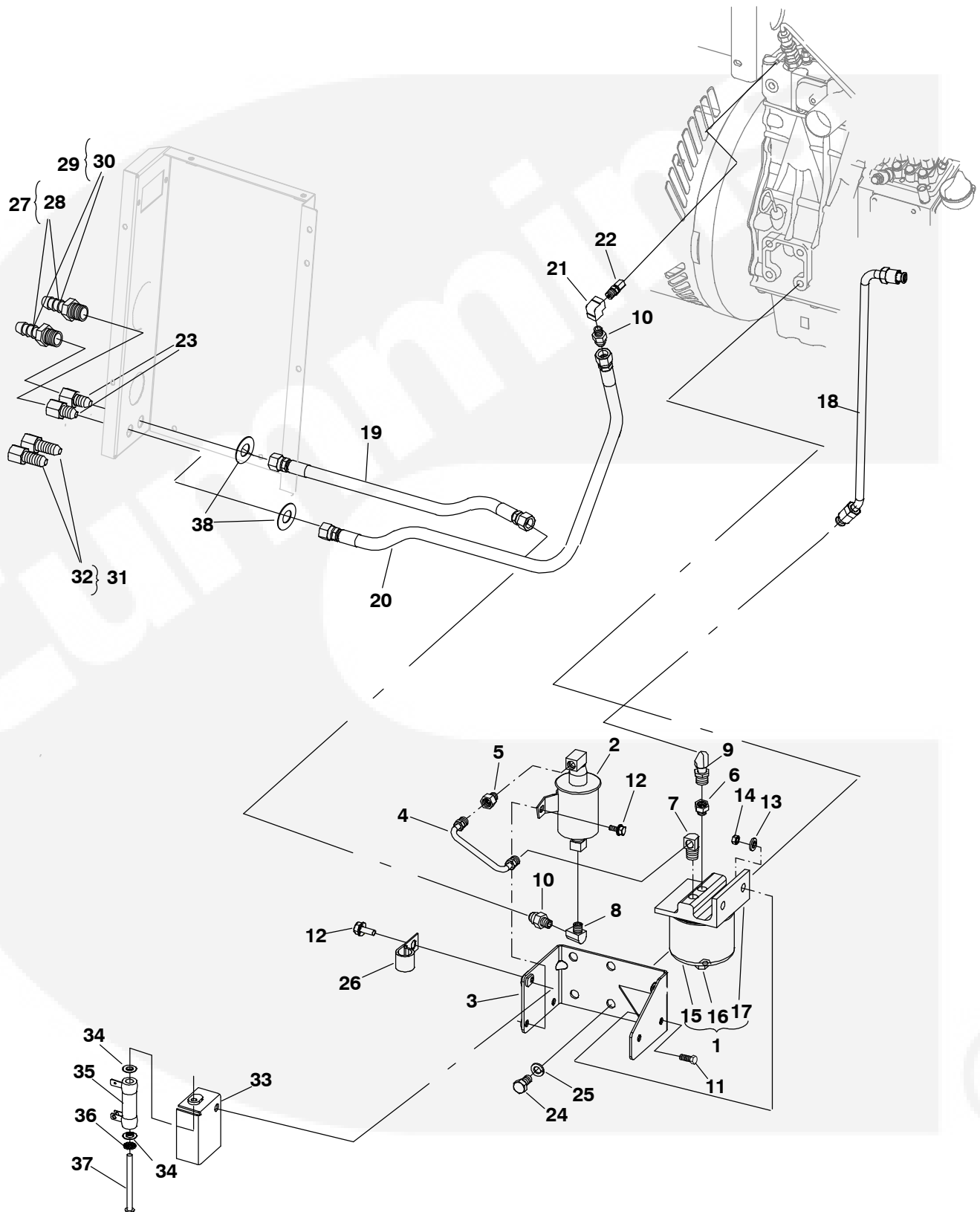
Alternator Components (24V)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	185-7225	1	Alternator	6	185-5784	2	Spring, Brush
1	185-7228	1	Rotor (Includes Cover and Bearing)	7	185-5783	2	Brush
2	185-5771	1	Cover, Bearing	8	185-6820	1	Regulator
3	185-7229	1	Bearing, Ball	9	185-6816	1	Rectifier Assy
4	185-5777	1	Bearing, Ball				
5	185-5782	1	Holder, Brush (Includes Brush and Spring)				

Note: Parts not Identified are Not For Sale.

Fuel Pump (Spec A-B)



Fuel Pump (Spec A-B)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			All parts Marked *)	21	502-0055	1	Elbow, Pipe
1	149-2100	1	*Filter, Base (Includes Element, Plug, and Base)	22	502-1245	1	Adapter, Pipe
2	149-2331-01	1	*Pump, Fuel (E5)	23	505-1489	2	Connector, Female Bulkhead
3	149-2618-04	1	*Bracket, Mounting	24	800-3030	3	Screw, Hex Head Cap (M10 x 1.25 x 20mm)
4	149-2601	1	*Line, Fuel (.25")	25	850-0114-55	3	Washer, Lock (M10)
5	502-0003	1	*Connector, Inverted Male	26	518-0515	1	Clip, Hose
6	502-0029	1	*Bushing, Pipe	27	149-2655	1	Kit, Fuel Adapter (Includes Barbed Hose Connector)
7	502-0041	1	*Elbow, Male	28	502-1162	2	Connector, Barbed Hose (1/4-18 x 3/8")
8	502-0020-01	1	*Elbow, Pipe	29	149-2654	1	Kit, Fuel Adapter (Includes Barbed Hose Connector)
9	502-0065	1	*Elbow, Inverted Male	30	502-1218	2	Connector, Barbed Hose (1/4-18 x 5/16")
10	505-1490	2	*Connector, Male	31	149-2612	1	Kit, Adapter Fitting (Includes Metric Adapters)
11	800-3017-19	2	*Screw, Hex Head Cap (M8 x 1.25 x 20mm)	32	505-1485	2	Adapter, Metric NPT
12	821-6002-02	2	*Screw, Hex Head Sems (M6 x 1 x 12mm)	33	304-0831-03	1	Bracket, Resistor (24V)
13	850-0114-54	2	*Washer, Lock (M8)	34	304-0796	2	Washer, Centering (24V)
14	862-0026-55	2	*Nut, Hex (M8)	35	304-0797	1	Resistor (24V)
15	149-2106	1	Element	36	856-0003	1	Washer, EIT (#10)(24V)
16	502-0028	1	Plug, Drain	37	813-0112	1	Screw, Round Head Machine (#10-32 x 2.5")(24V)
17	149-2635	1	Base, Aluminum	38	526-0406	2	Washer, Flat (M14)
18			Line, Fuel Assy				
	501-0709	1	MDKBL				
	501-0710	1	MDKBM, MDKBN				
19	501-0672-01	1	Line, Fuel (28.5")				
20	501-0672-04	1	Line, Fuel (38.5")				

REAR BULKHEAD

FRONT BULKHEAD

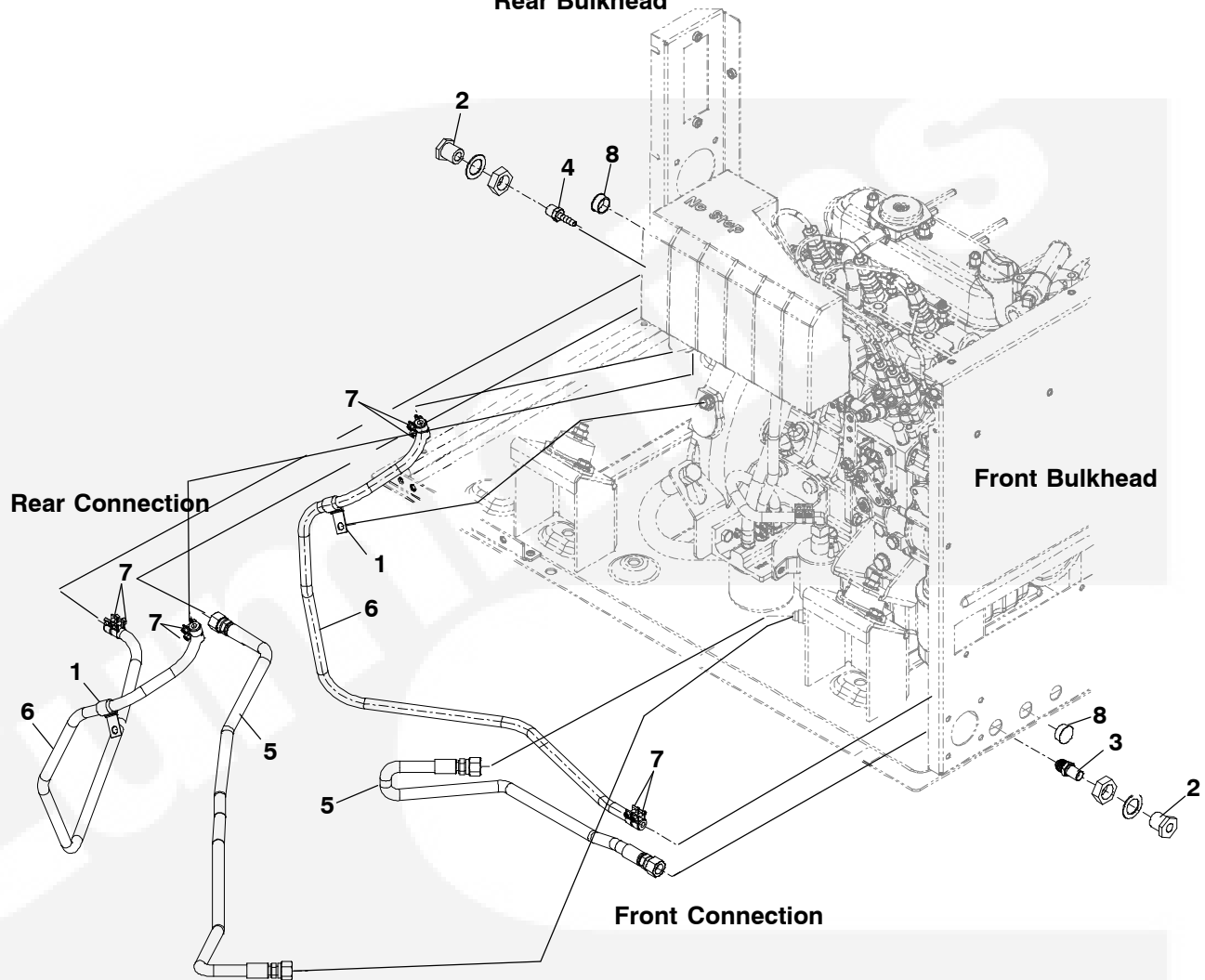
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

Fuel Pump, Fuel Transfer (Spec C)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
Fuel Transfer				15	862-0026-55	2	*Nut, Hex (M8)
	541-0853	1	Kit, Label, Bulkhead	16	850-0114-54	2	*Washer, Lock (M8)
1	505-1489	2	Connector, Bulkhead	17	149-2761-03	1	*Bracket, Fuel Pump
2	526-0406	2	Washer, Flat (M14)	18	800-3017-19	2	*Screw, Hex Head Cap (M8 x 1.25 x 20mm)
3	503-2588-04	1	Hose, Fuel (Front or Rear)	19	821-6002-02	5	Screw, Hex Head Sems (M6 x 12mm)
4	503-2588-03	1	Hose, Fuel (Front or Rear)	20	518-0515	1	Clip
5	502-0055	1	Elbow, Pipe	21	850-0114-55	3	Washer, Lock (M10)
6	502-1245	1	Adapter, Pipe	22	800-3030	3	Screw, Hex Head Sems (M10 x 1.25 x 20mm)
7	502-1368	1	Tee, Street	23	149-2646	1	*Pump, Fuel
Fuel Pump				24	304-0832	1	Resistor, (24V)
8	149-2634-01	1	Assy Filter, Fuel (Includes Parts Marked *)	25	502-1367-02	3	*Connector, Hose (1 per Filter Opening)
9	505-1490	2	*Connector, Male	26	502-0020-01	1	*Elbow, Street
10	502-1353-02	1	*Elbow, 90° Street	27	503-2200-08	1	*Hose, Fuel
11	503-2309	12	*Clamp, Hose	28	A026K278	1	*Sperator, Fuel Filter
12	503-2200-07	1	*Hose, Fuel				
13	502-1367-01	1	*Connector, Hose				
14	503-2200-09	1	*Hose, Fuel				

Fuel Transfer (Begin Spec D)

Rear Bulkhead



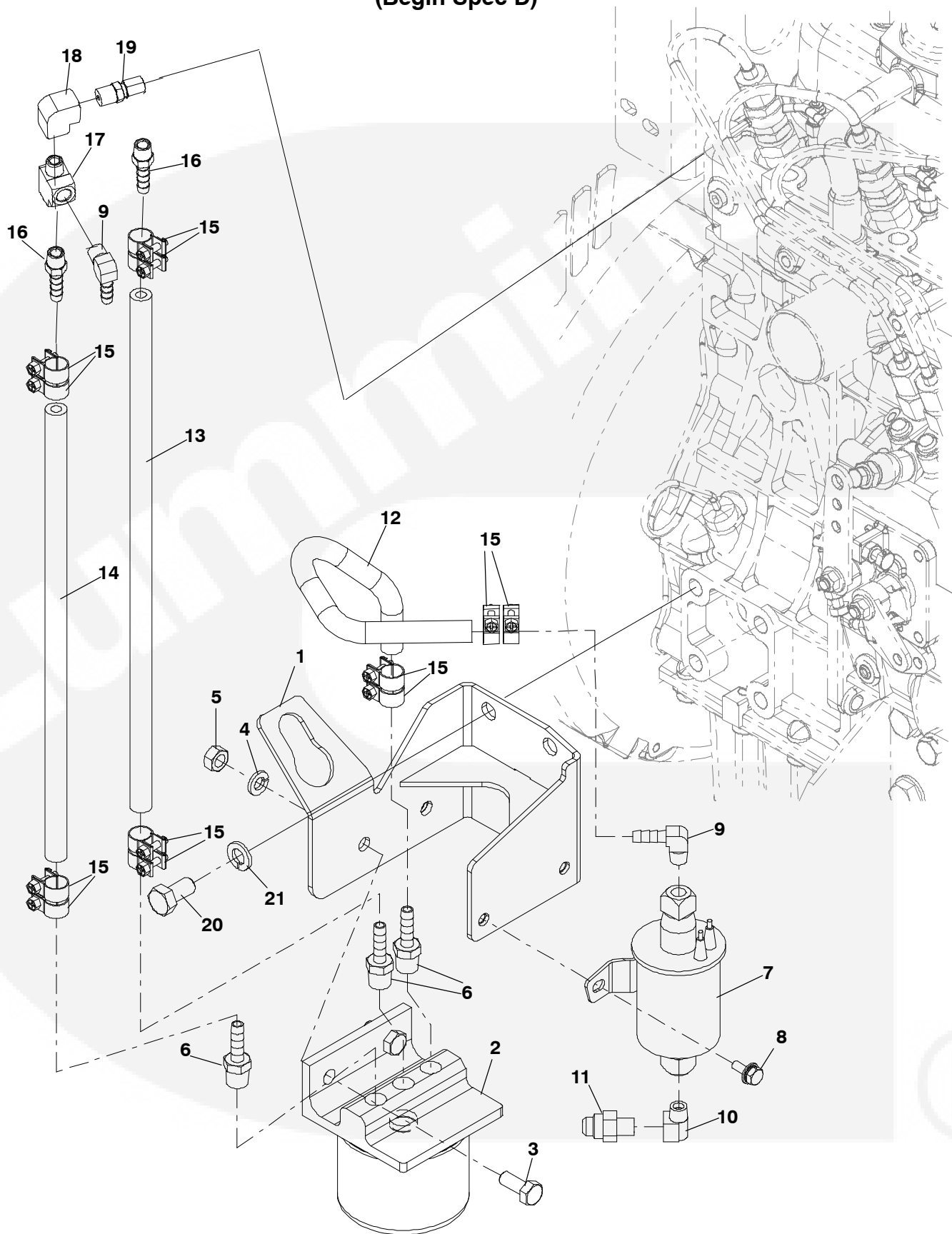
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	518-0515	1	Clamp, Hose
2	502-1133	2	Coupling, Hose
3	502-1615	1	Coupling, Hose
4	502-1367-02	1	Connector, Hose
5	503-2588-03	1	Hose, Fuel

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
6	503-2935-02	1	Hose, Fuel
7	503-2808	4	Clamp, Hose
8	517-0136-01	2	Plug, Hose (Front and Rear Housed)

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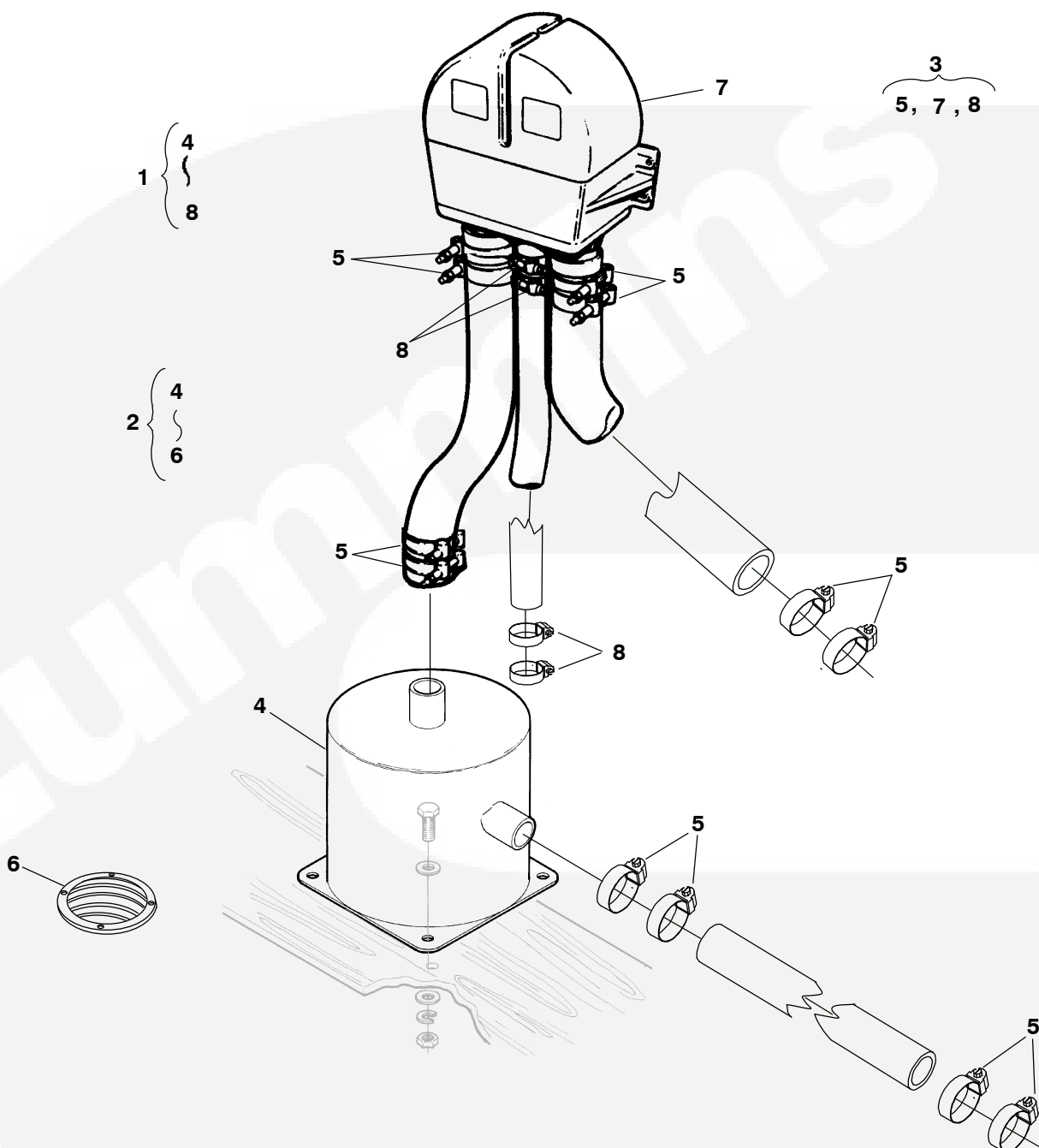
Fuel Pump (Begin Spec D)



Fuel Pump (Begin Spec D)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	149-2830-03	1	Bracket, Fuel Pump	10	502-0020-01	1	Elbow, Pipe
2	149-2634-01	1	Filter, Full	11	505-1490	1	Connector, Male
3	800-3017-19	2	Screw, Hex Head Cap (M8 x 1.25 x 20mm)	12	503-2883-01	1	Hose, Fuel
4	850-0114-54	2	Washer, Split Locking (M8)	13	503-2883-08	1	Hose, Fuel
5	862-0026-55	2	Nut, Hex (M8 x 1.25)	14	503-2883-07	1	Hose, Fuel
6	502-1367-02	3	Connector, Hose (1/4 NPT x 1/4 Hose)	15	503-2808	12	Clamp, Hose
7			Pump, Fuel	16	502-1367-01	2	Connector, Hose (1/8 NPT x 1/4 Hose)
	149-2646	1	12V	17	502-1368	1	Tee, Street (1/8 NPT)
	149-2795	1	24V	18	502-0055	1	Elbow, Pipe
8	821-6002-02	2	Screw, Hex Head Sems (M6 x 1.0 x 12mm)	19	502-1245	1	Adapter, Pipe
9	502-1353-02	2	Elbow, 90° Pipe	20	800-3030	1	Screw, Hex Head Cap (M10 x 1.25 x 20mm)
				21	850-0114-55	3	Washer, Split Locking (M10)

Water Separator/Muffler



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-3217	1	Kit, Muffler/Separator (Includes Parts Marked *)
2	155-2030	1	Kit, Muffler Marine (Includes Parts Marked +)
3	155-3216	1	Kit, Water Separator (Includes Parts Marked #)
4	155-2029	1	*+ Muffler, Marine
5			Clamp, Hose (2")
	503-1142	8	+ Muffler Kit
	503-1142	4	# Separator Kit
	503-1142	10	* Muffler/Separator Kit

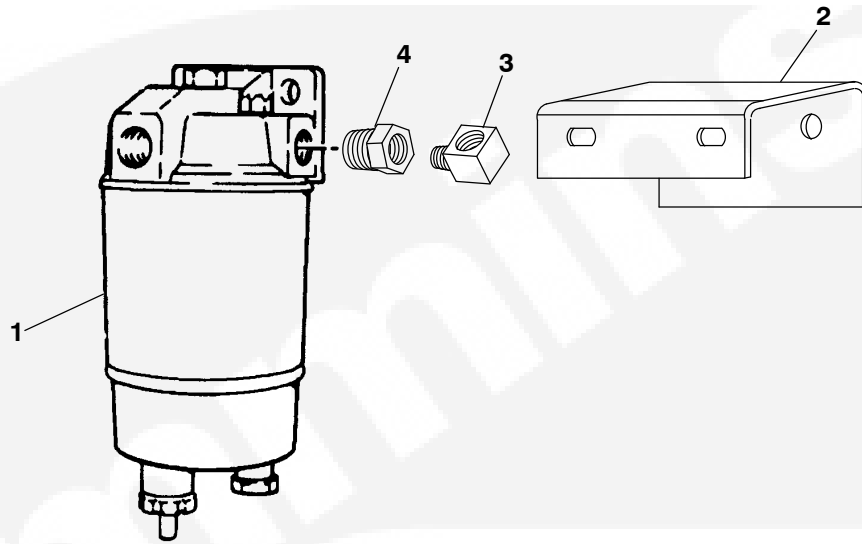
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
6	155-1002	1	*+ Strainer, Slotted
7	155-3218	1	*# Separator, Water (2")
8	503-1139	4	*# Clamp, Hose (1-1/2")

* - Parts Included in Muffler/Separator Kit.

+ - Parts Included in Muffler Kit.

- Parts Included in Water Separator Kit.

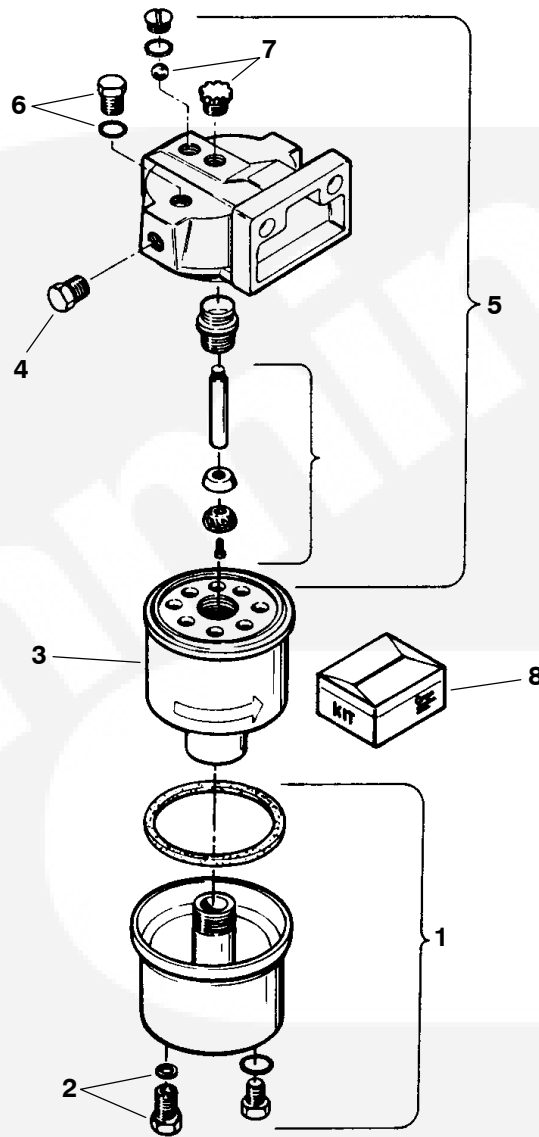
Remote Water Separator



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	149-2073	1	Kit, Remote Fuel/Water Separator
1	149-1908-05	1	Separator, Fuel/Water (See Separate Page for Components)

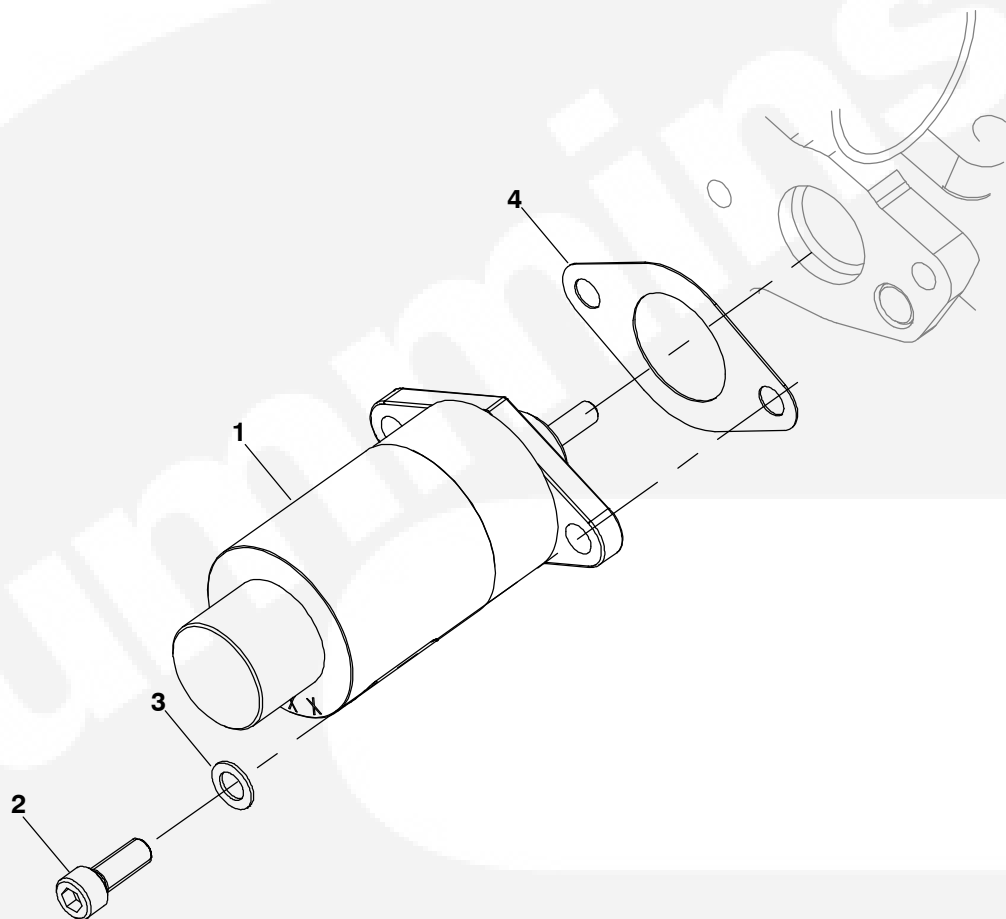
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
2	149-2041-03	1	Bracket, Separator Mounting
3	502-0020	1	Elbow, Street 90°
4	502-0029	2	Bushing, Pipe

Remote Water Separator Components



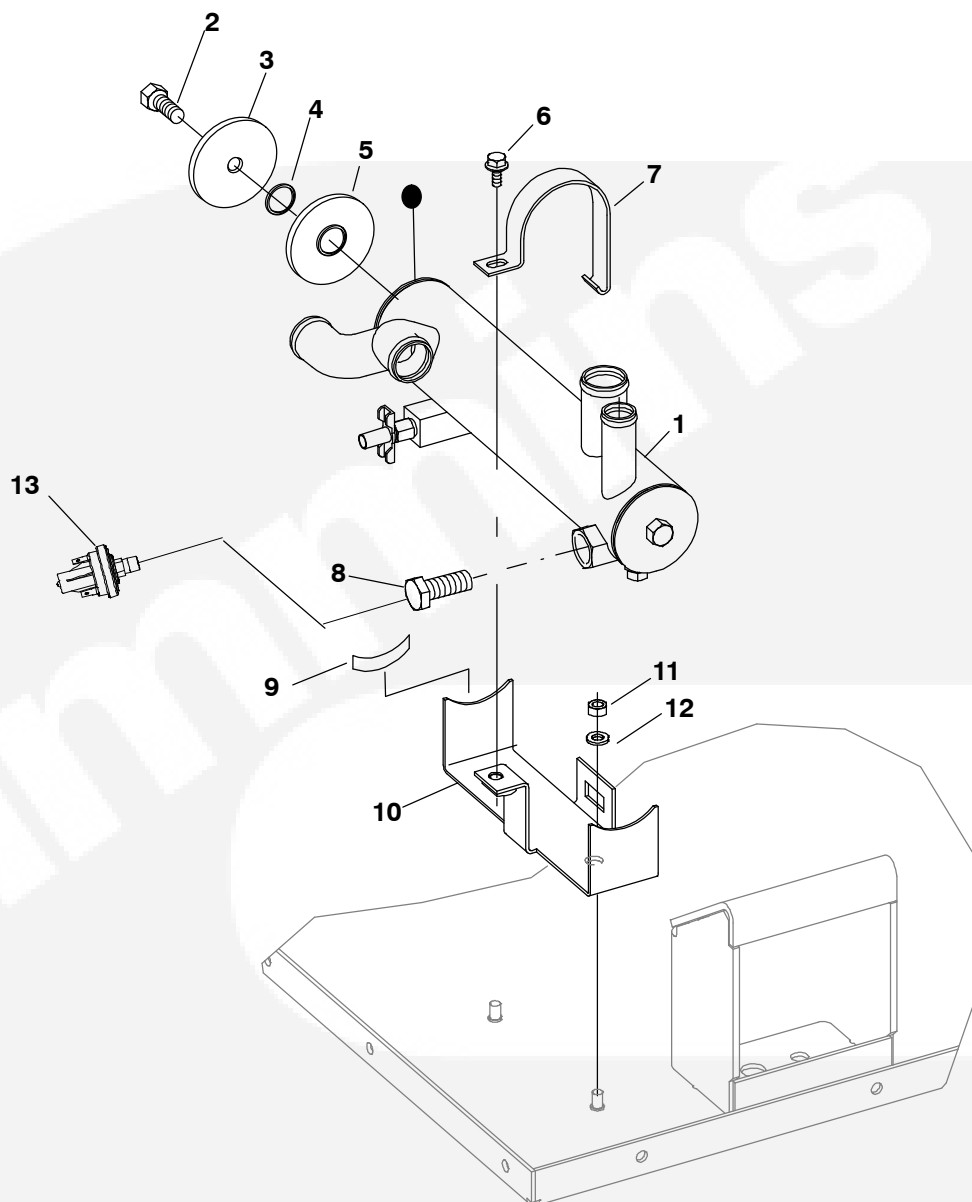
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	149-1908-05	1	Separator, Water	6	149-1952	1	Plug, Vent (Includes O'Ring)
	149-2046	1	Kit, Metal Bowl Replacement (Includes Plug, O'Rings and Drain Assy)	7	149-2047	1	Assy, Pump (Includes Plunger, Retainer, Shaft, Check Ball, Knob and Screw)
2	149-1953	1	Assy, Drain (Includes Knob and Seal)	8	149-2045	1	Kit O'Ring (Includes Seal and Plunger)
3	149-1914-01	1	Element (Includes Seals)				
4	502-0153	1	Plug, Hex (1/4")				
5	149-1949	1	Assy, Replacement Head (Includes Vent Plug, O'Rings, Seal, Cap, Tube and Pump Assy)				

Governor Actuator



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	306-5006-01	1	Actuator, Governor (12V)
	306-5006-02	1	(24V)
2	725-1027	2	Screw, Slotted Head Cap (M6 x 1 x 16mm)(1/32")
3	526-0063	2	Washer, Copper
4	184-0071	1	Gasket, Solenoid Cover

Heat Exchanger



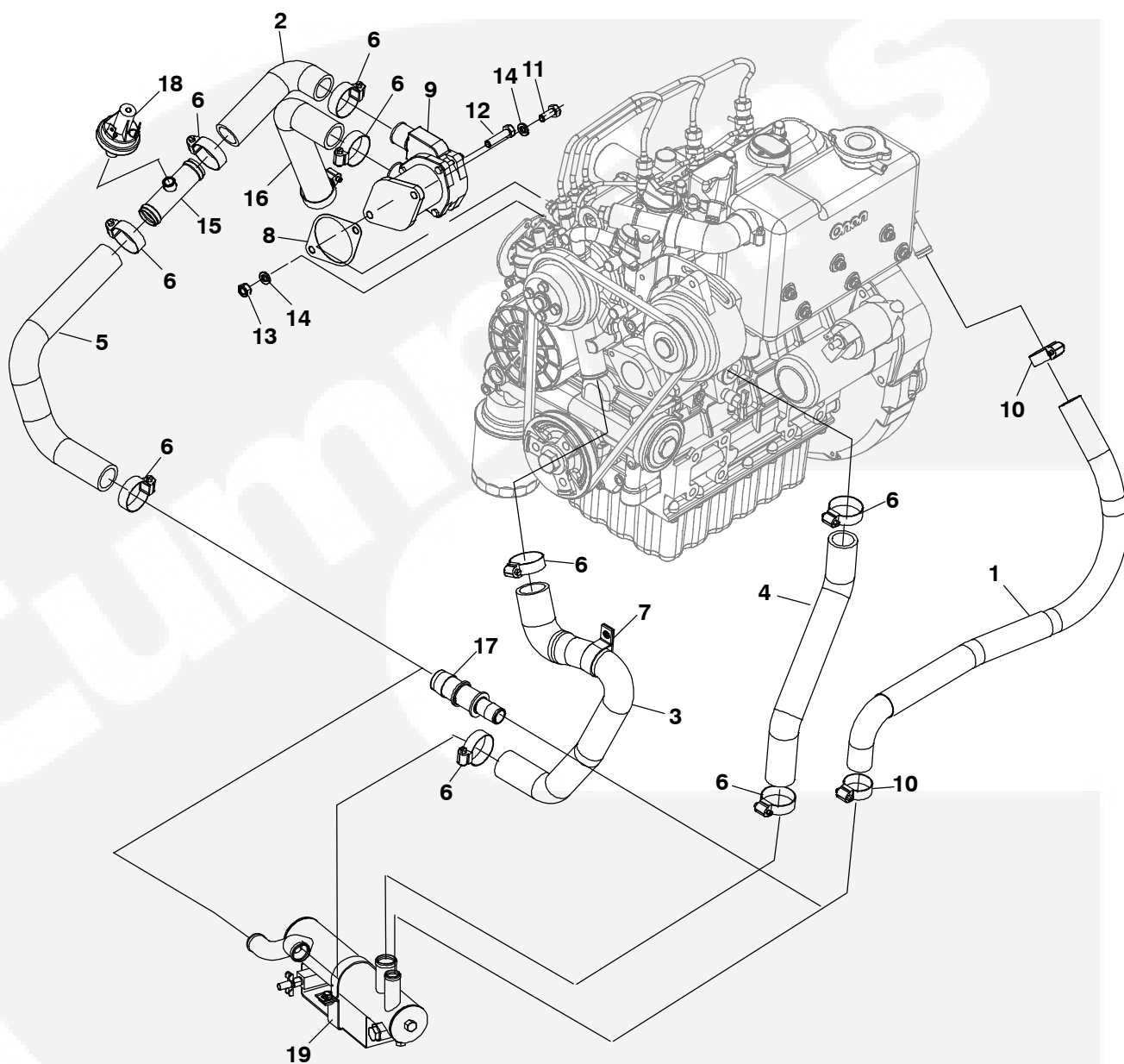
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	130-5176	1	Kit,End Cover (Includes Parts Marked *)	7	130-4740-03	1	Strap, Mounting
1			Exchanger, Heat	8	130-4434	1	Pencil, Zinc
	130-4985-03	1	Spec A-D	9	508-0210	2	Edging, Heat Exchanger Bracket (90mm)
	130-7489-02	2	Begin Spec E	10	130-4739-03	1	Bracket, Heat Exchanger
2	800-0317	1	*Screw, Hex Head (5/16-18)	11	862-0026-54	2	Nut, Hex (M6 x 1mm)
3	130-5169	1	*Cover, End	12	850-0114-53	2	Washer, Lock (M6)
4	509-0351	1	*O'Ring	13	309-0717	1	Switch, Pressure
5	130-5170	1	*Gasket, End Cover				
6	821-6002-02	1	Screw, Hex Head Sems (M6 x 1 x 12mm)				

* - Parts Included in End Cover Kit

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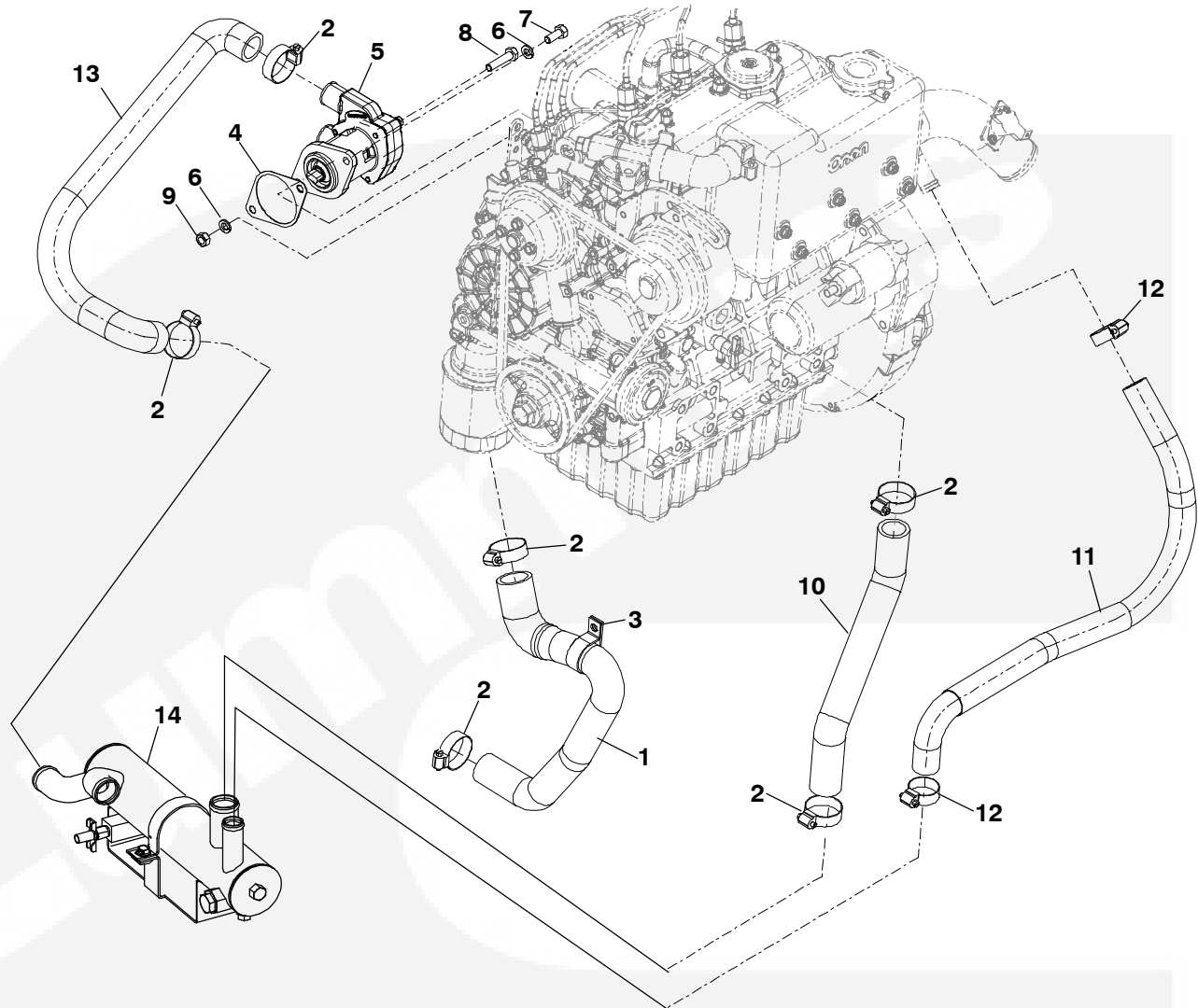
Cooling System (Spec A-C)



Cooling System (Spec A-C)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	501-0712-01	1	Hose, Coolant (MDKBL Heat Exchange Wet Exhaust)	11	800-3017-19	1	Screw, Hex Head (M8 x 20mm) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)
	501-0712-02	1	(Heat Exchange Wet Exhaust MDKBM and MDKBN)	12	800-3017-22	1	Screw, Hex Head (M8 x 35mm) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)
	503-2089-02	1	(Keel Cooling Wet all models)				
2	503-2207	1	Hose, Coolant (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)	13	862-0026-55	1	Nut, Hex (M8) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)
3	503-2195	1	Hose, Coolant (All Options)	14	850-0114-54	2	Washer, Lock (M8) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)
4	503-2196	1	Hose, Coolant (Heat Exchange Wet and Dry Exhaust)				
5	503-2197	1	Hose, Coolant (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)	15	130-5387-01	1	Tube, Low Pressure Switch (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)
6			Clamp, Hose Spec A-B	16	503-2230	1	Hose, Coolant (Spec A-B) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)
	503-1137	10	Heat Exchange Dry and Wet				
	503-1137	8	Keel Cooling Wet				
	503-1137	2	Keel Cooling Dry				
			Spec C				
	503-1137	8	Heat Exchange Dry and Wet				
	503-1137	6	Keel Cooling Wet				
	503-1137	2	Keel Cooling Dry	17	502-1354	1	Reducer, Hose Connector (Keel Cooling Wet Exhaust)
7	518-0548-05	1	Clamp, Hose (All Options)	18	309-0667	1	Switch, Pressure (12 and 24V Gnd 12v Iso)
8	185-6579	1	Gasket, Water Pump (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust)	19	-	1	Exchanger, Heat (See Heat Exchanger Page for Details)
9			Water Pump (See Separate Page for Components)				
	132-0358	1	Spec A-B	* - For Heat Exchanger Service Parts See Heat Exchanger Previous Page			
	132-0459	1	Spec C				
10	503-1136	2	Clamp, Hose (Keel Cooling Wet Exhaust and Heat Exchange Wet Exhaust)				

Cooling System Wet and Dry Exhaust (Begin Spec D)

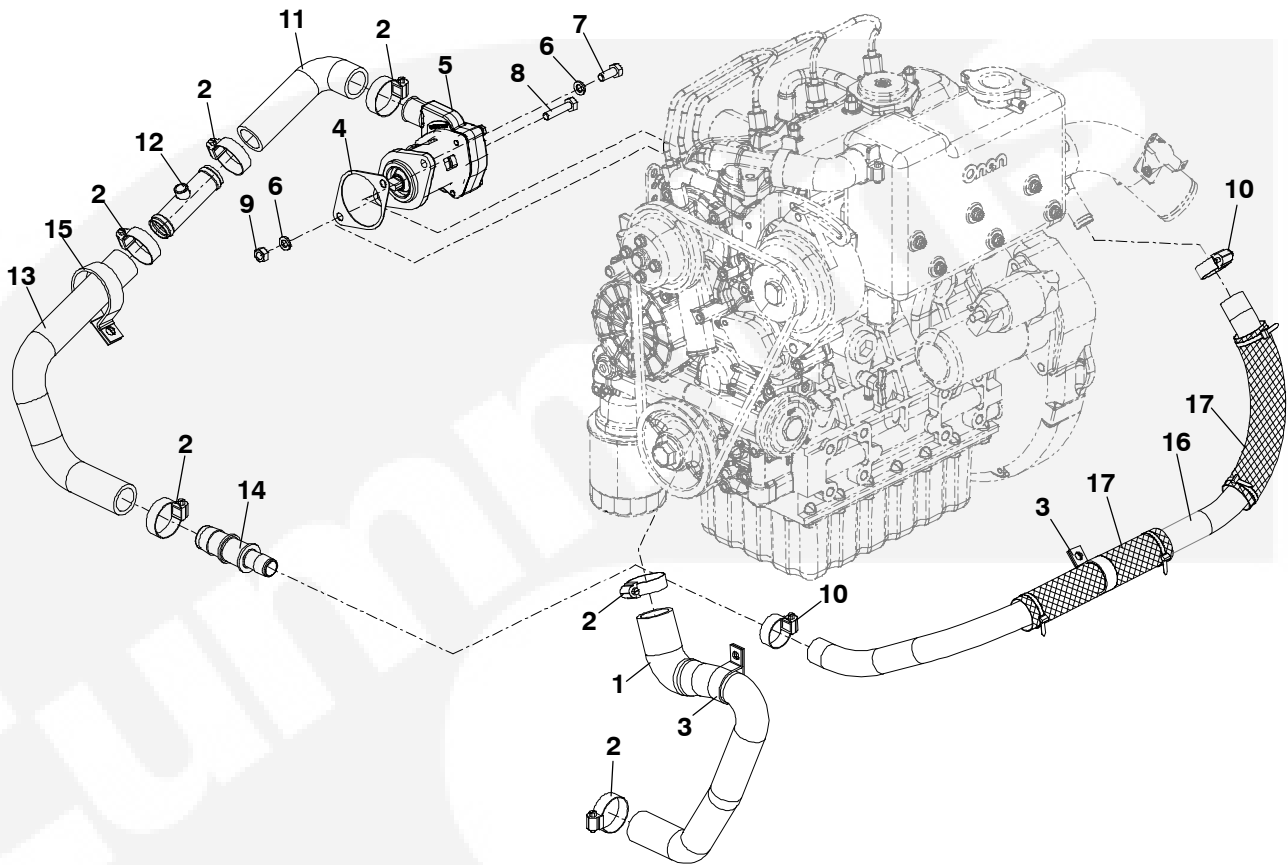


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	503-2195	1	Hose, Coolant
2	503-1137	6	Clamp, Hose
3	518-0548-05	1	Clamp, Hose (Insulated)
4	185-6579	1	Gasket, Water Pump
5	132-0459	1	Pump, Water
6	850-0114-54	2	Washer, Split Locking (M8)
7	800-3017-19	1	Screw, Hex Head Cap (M8 x 1.25 x 20mm)
8	800-3017-22	1	Screw, Hex Head Cap (M8 x 1.25 x 35mm)
9	862-0026-55	1	Nut, Hex (M8 1.25mm)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
10	503-2196	1	Hose, Coolant
11			Hose
	501-0712-01	1	MDKBL
	501-0712-02	1	MDKBM and MDKBN
12	503-1136	1	Clamp, Hose (Wet)
13	503-2908	1	Hose
14	-	1	Exchanger, Heat (See Heat Exchanger Page for Details)

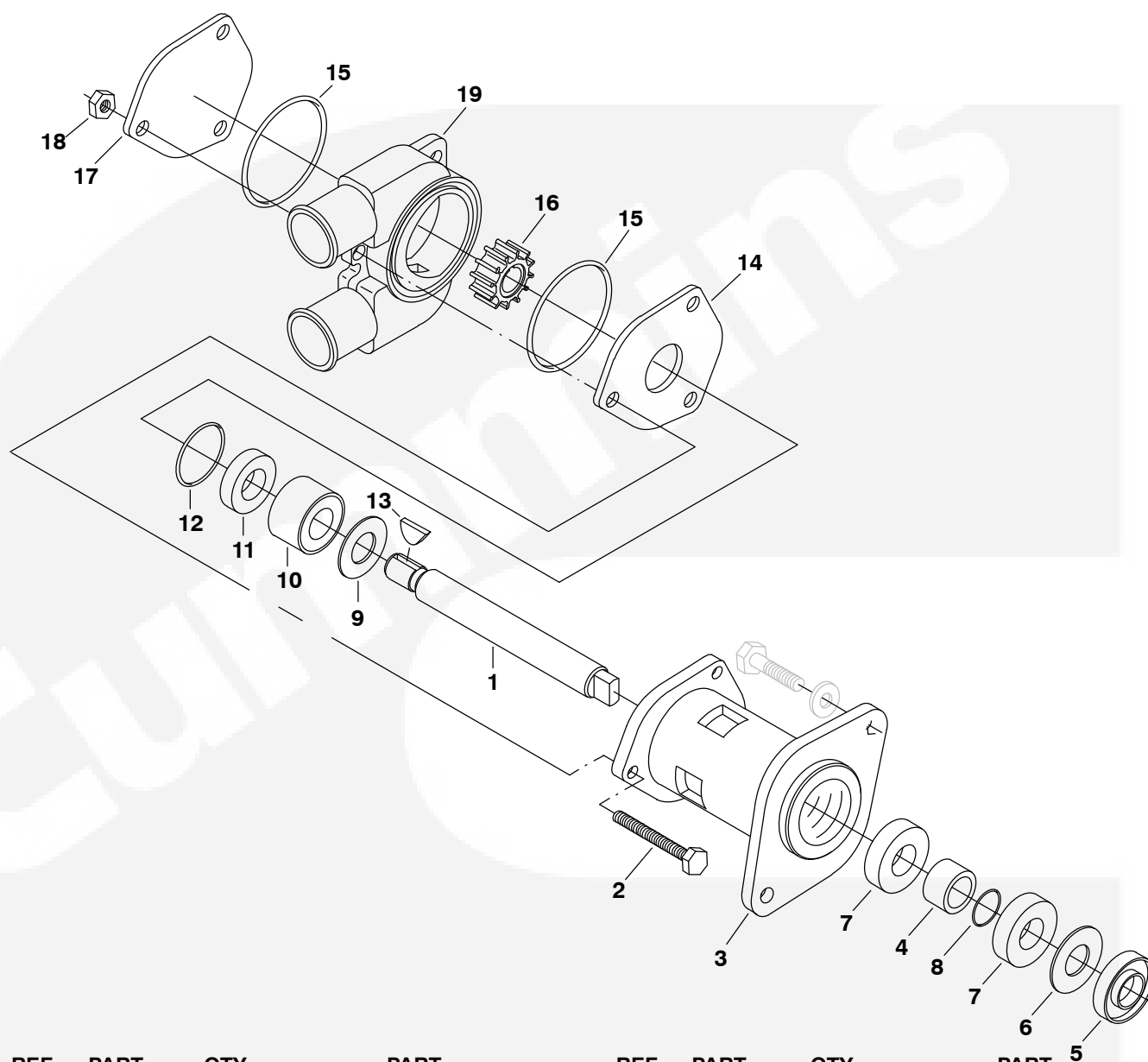
* - For Heat Exchanger Service Parts See Heat Exchanger Previous Page

Keel Cooling (Begin Spec D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	503-2195	1	Hose, Coolant	9	862-0026-55	1	Nut, Hex (M8 x 1.25mm)
2	503-1137	2	Hose, Clamp	10	503-1136	2	Clamp, Hose (Wet Exhaust)
	503-1137	6	Dry Exhaust	11	503-2207	1	Hose, Coolant (Raw Water)
			Wet Exhaust	12	130-5387-01	1	Tube, Low Pressure Switch (Wet Exhaust)
3			Clamp, Hose (Insulated)	13	503-2197	1	Hose, Coolant (Raw Water)
	518-0548-05	1	Dry Exhaust	14	502-1354	1	Reducer, Hose Connector
	518-0548-05	2	Wet Exhaust	15	130-4830	1	Clamp, Hose (2 OD)
4	185-6579	1	Gasket, Water Pump	16	503-2916-01	1	Hose, Water (Wet Exhaust)
5	132-0459	1	Pump, Water		503-2916-02	1	MDKBL
6	850-0114-54	2	Washer, Split Locking (M8)		503-2916-02	1	MDKBM and MDKBN
7	800-3017-19	1	Screw, Hex Head Cap (M8 x 1.25 x 20mm)	17	898-1311-02	2	Sleeving, Nylon Mesh
8	800-3017-22	1	Screw, Hex Head Cap (M8 x 1.25 x 35mm)				

Raw Water Pump Components (Spec A-B)

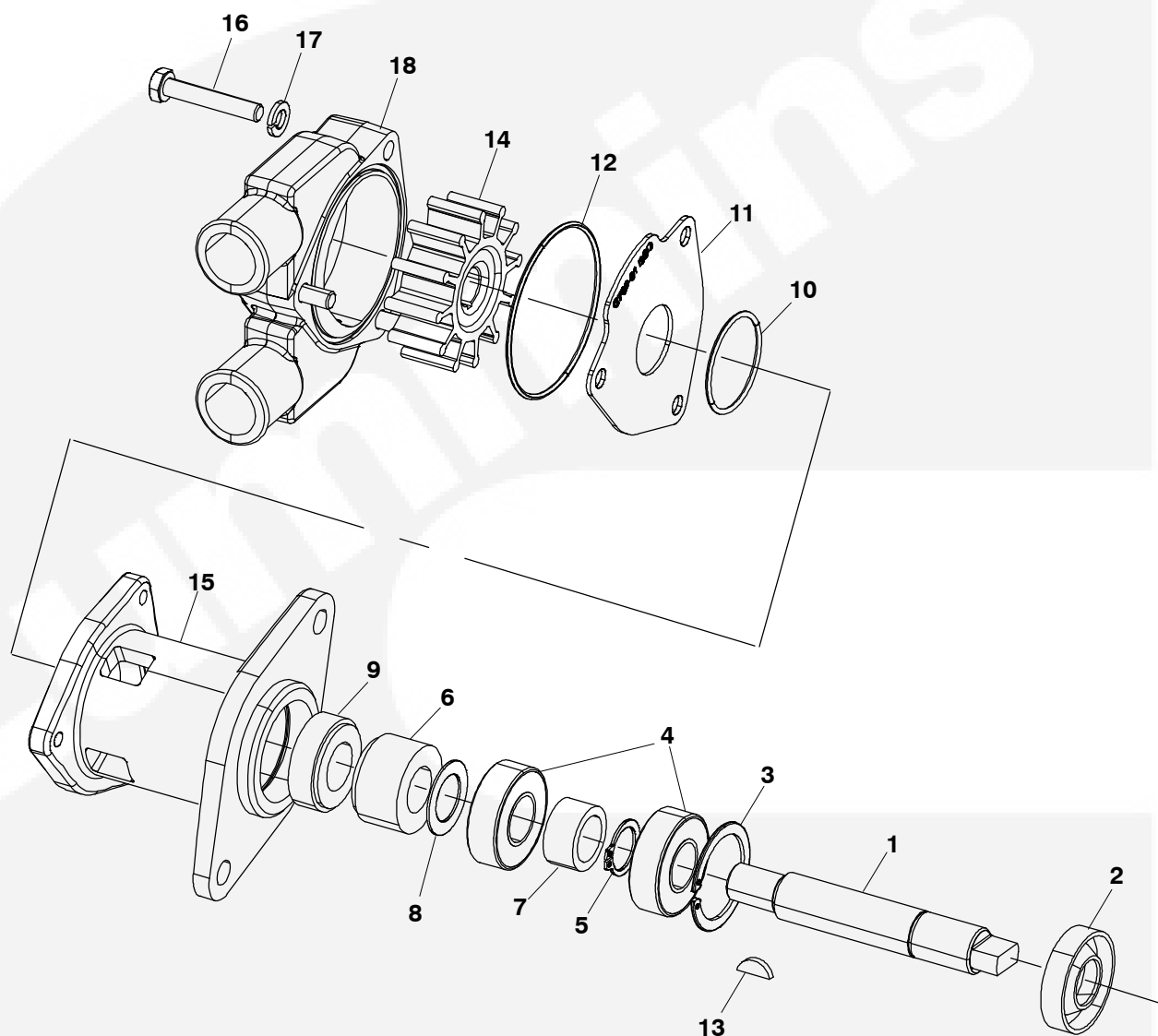


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	132-0379	1	Kit, Minor Service (Includes Parts Marked *)	12	132-0370	1	+ O'Ring
	132-0380	1	Kit, Major Service (Includes Parts Marked +)	13	132-0374	1	+ Key
	132-0358	1	Pump, Water	14	132-0371	1	+ Plate, Wear
1	132-0360	1	Shaft	15	132-0372	2	*+ O'Ring
2	132-0376	3	Bolt	16	132-0375	1	*+ Impeller
3	132-0362	1	Body	17	132-0373	1	+ Plate, Cover
4	132-0367	1	Spacer	18	132-0377	3	Nut
5	132-0361	1	+ Seal, Lip	19	132-0378	1	Housing
6	132-0363	1	+ Ring, Internal Retaining	20	132-0379	1	Kit, Minor Service (Includes Parts Marked *)
7	132-0364	2	+ Bearing, Ball	21	132-0380	1	Kit, Major Service (Includes Parts Marked +)
8	132-0365	1	+ Ring, External Retaining				
9	132-0368	1	+ Washer,				
10	132-0366	1	+ Seal, Mechanical				
11	132-0369	1	+ Seat, Seal				

* - Parts Included in Minor Service Kit.

+ - Parts Included in Major Service Kit.

Raw Water Pump Components (Begin Spec C)

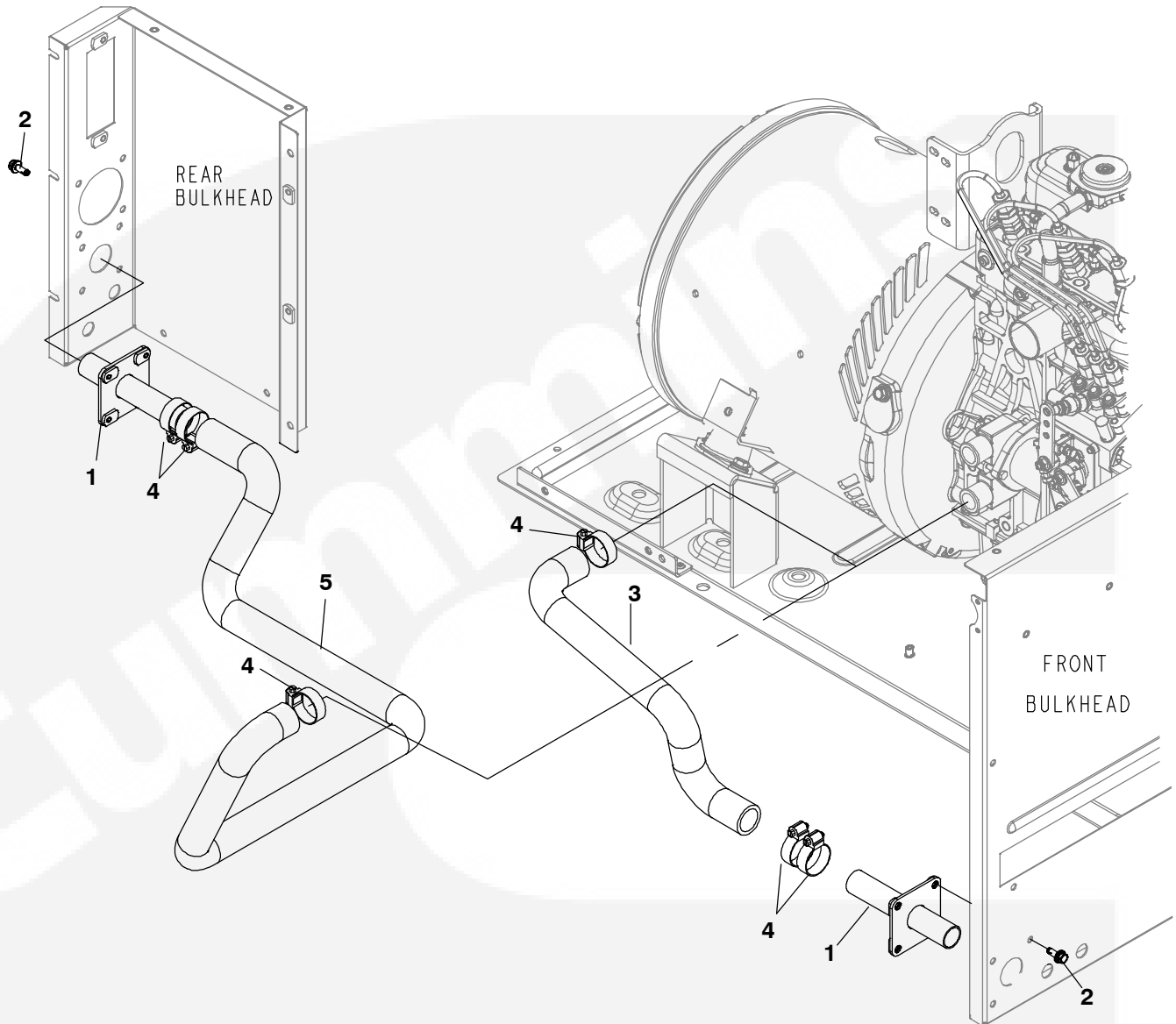


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	541-1519	1	Kit, Minor Service (Includes Parts Marked *)	9	132-0369	1	+ Seat, Seal
	541-1520	1	Kit, Major Service (Includes Parts Marked +)	10	132-0370	1	+ O'Ring
	132-0459	1	Pump, Water	11	130-6526	1	+ Plate, Wear
1	132-0360	1	Shaft	12	132-0372	2	*+ O'Ring
2	132-0361	1	+ Seal, Lip	13	132-0374	1	+ Key
3	132-0363	1	+ Ring, Internal Retaining	14	132-0498	1	*+ Impeller
4	132-0364	2	+ Bearing, Ball	15	132-0460	1	Body, Water Pump
5	132-0365	1	+ Ring, External Retaining	16	800-6362	2	Screw
6	132-0366	1	+ Seal, Mechanical	17	850-2088	2	Washer, Lock
7	132-0367	1	Spacer	18	132-0461	1	Body, Water Pump
8	132-0368	1	+ Washer,				

* - Parts Included in Minor Service Kit.

+ - Parts Included in Major Service Kit.

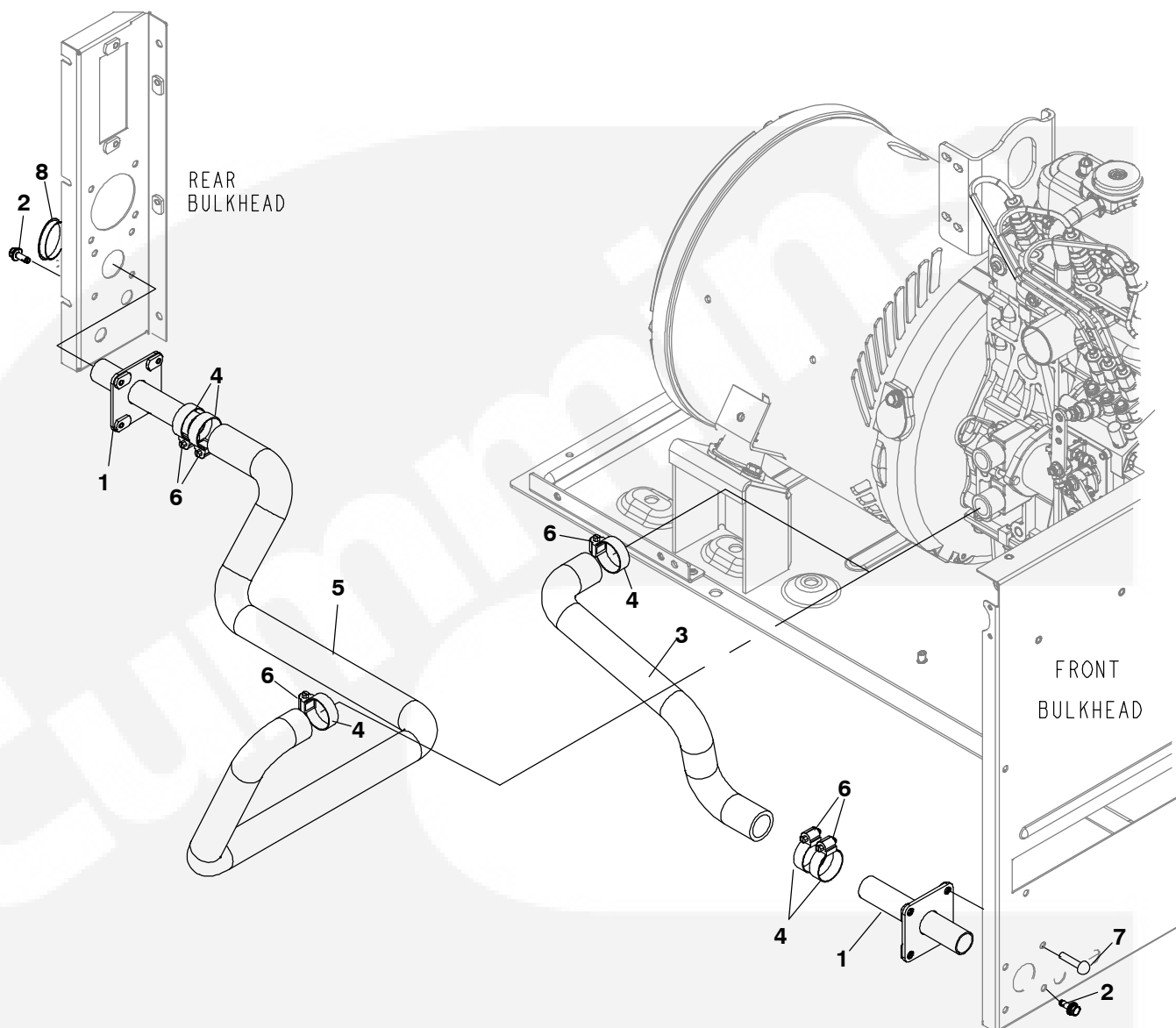
Raw Water Inlet (Spec C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-7211	1	Assy, Bulkhead
2	821-6006-01	4	Screw, Hex Head Sems Stainless (M6 x 1.0 x 16mm)
3	503-2580	1	Hose, Front Water
4	503-1137	3	Screw, Hose Clamp

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
5			Hose, Rear Water
	503-2578	1	MDKBL
	503-2579	1	MDKBM and MDKBN

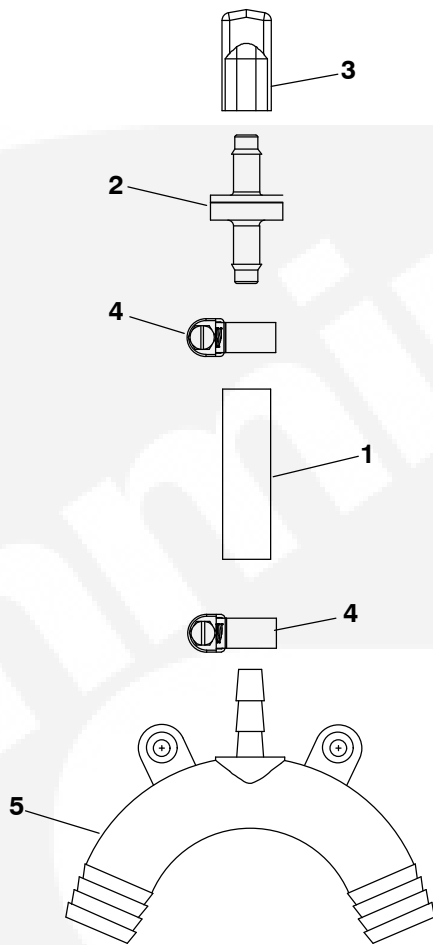
Raw Water Inlet (Begin Spec D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	404-0058	1	Assy, Bulkhead
2	800-6395-01	4	Screw, Hex Head Sems (M6 x 1.0 x 16mm)
3	503-2580	1	Hose, Front Water
4	503-1137	3	Clamp, Hose
5			Hose, Rear Water

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
503-2578		1	MDKBL
503-2579		1	MDKBM and MDKBN
6	503-2823	3	Cover, Hose Clamp
7	517-0131-02	4	Plug, Hole
8	517-0138-07	1	Plug, Hole

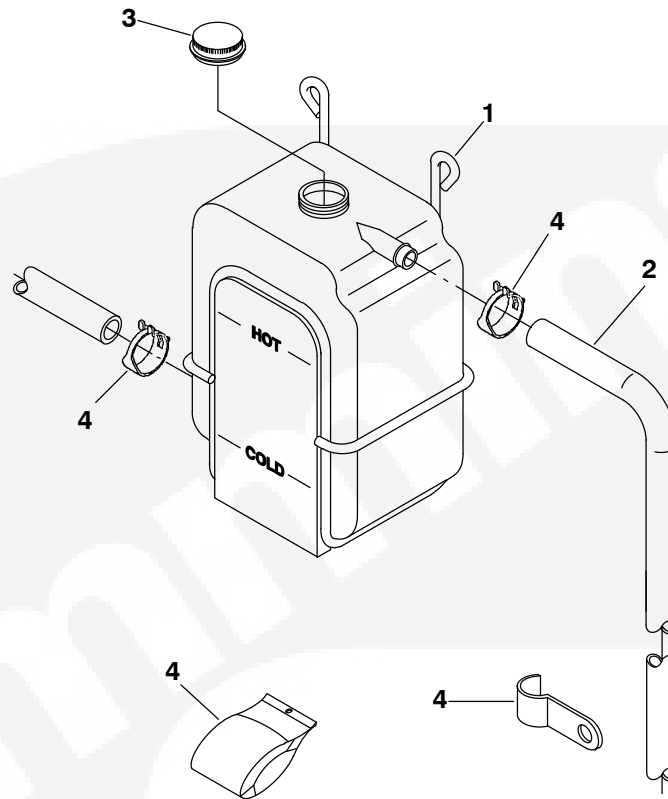
Vacuum Relief Valve



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	541-0876-01	1	Kit, Siphon Break	5	502-1463	1	Connector, Hose
1	503-2728-01	1	Hose, Coolant	6	503-0977	2	*Clamp, Hose
2	504-0223	1	Valve, Check	7	508-1102	2	*Grommet, Rubber
3	502-1425-02	1	Cap, Tube				
4	503-2309	2	Clamp, Hose				

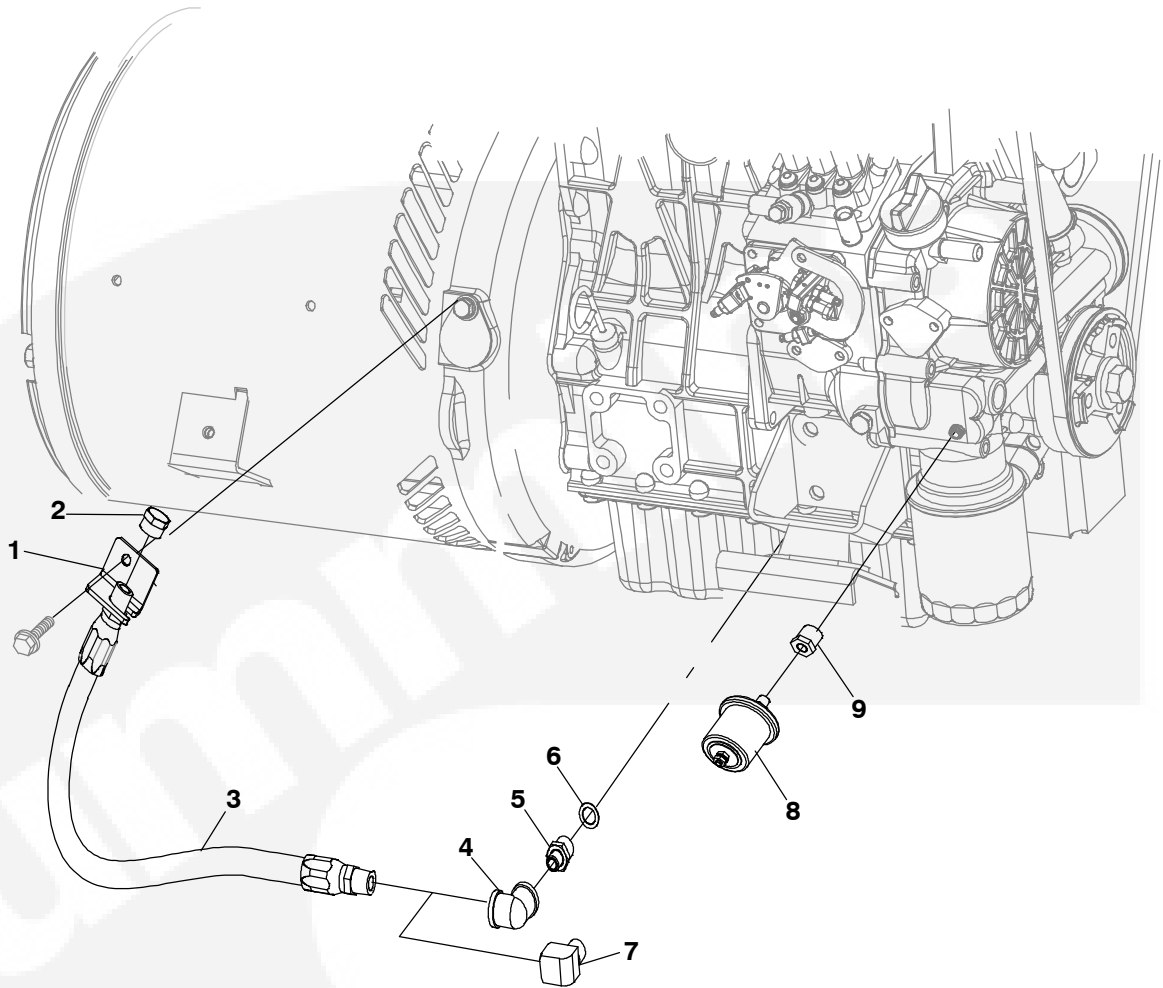
* - Parts not shown, loose in kit.

Coolant Recovery Tank



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	130-3574	1	Kit, Coolant Recovery	4	130-3573	1	Hardware Package (Includes Mounting Hardware)
1	130-3571	1	Hanger, Tank	5	130-3570	1	Tank, Coolant
2	503-1692	1	Hose (5/16 I.D. x 120" Lg.)				
3	130-3572	1	Cap, Tank				

Oil System (Spec A-C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
---------	----------	-----------	------------------

1	120-1332-02	1	Bracket, Oil Drain
2	502-1123	1	Cap, Pipe
3	501-0910	1	Hose, Oil Drain
4	502-0263	1	Elbow, Pipe (MDKBL)
5	102-1485	1	Adapter, Oil Drain (MDKBL)
6	185-5495	1	Gasket, Oil Drain (MDKBL)
7	502-1180	1	Elbow, Pipe (MDKBM and MDKBN)

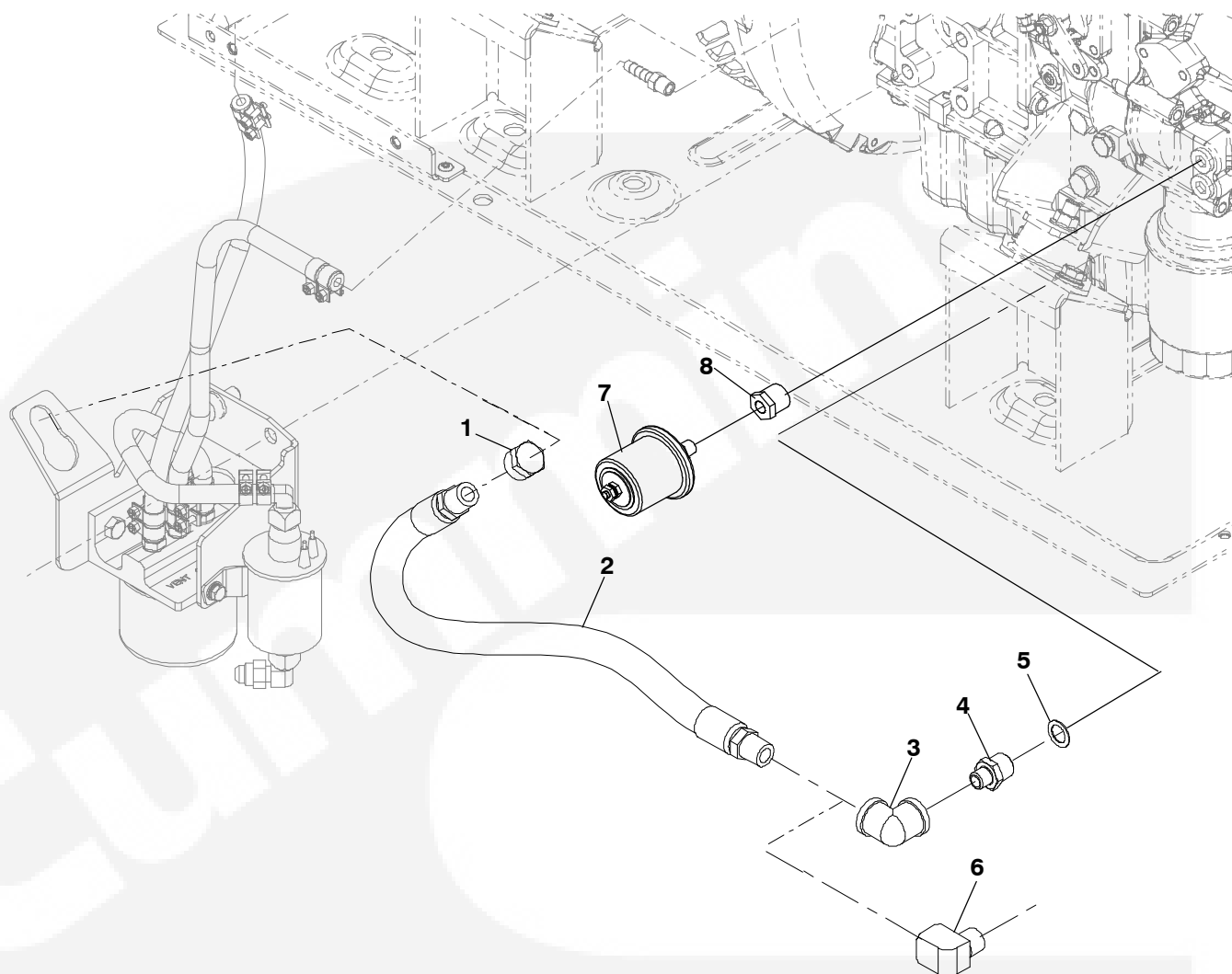
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
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8	193-0244	1	*Sender, Oil Pressure Negative Ground (B200 B201)
	193-0430-01	1	+ Isolated Ground (B380)
9	505-0395	1	Reducer, Bushing (1/8" NPSF)

* - Sender Included in Sender Kit Listed on Water Flange Page.

+ - Sender Included in Isolated Ground Kit Listed on Isolated Ground Page.

Oil System (Begin Spec D)

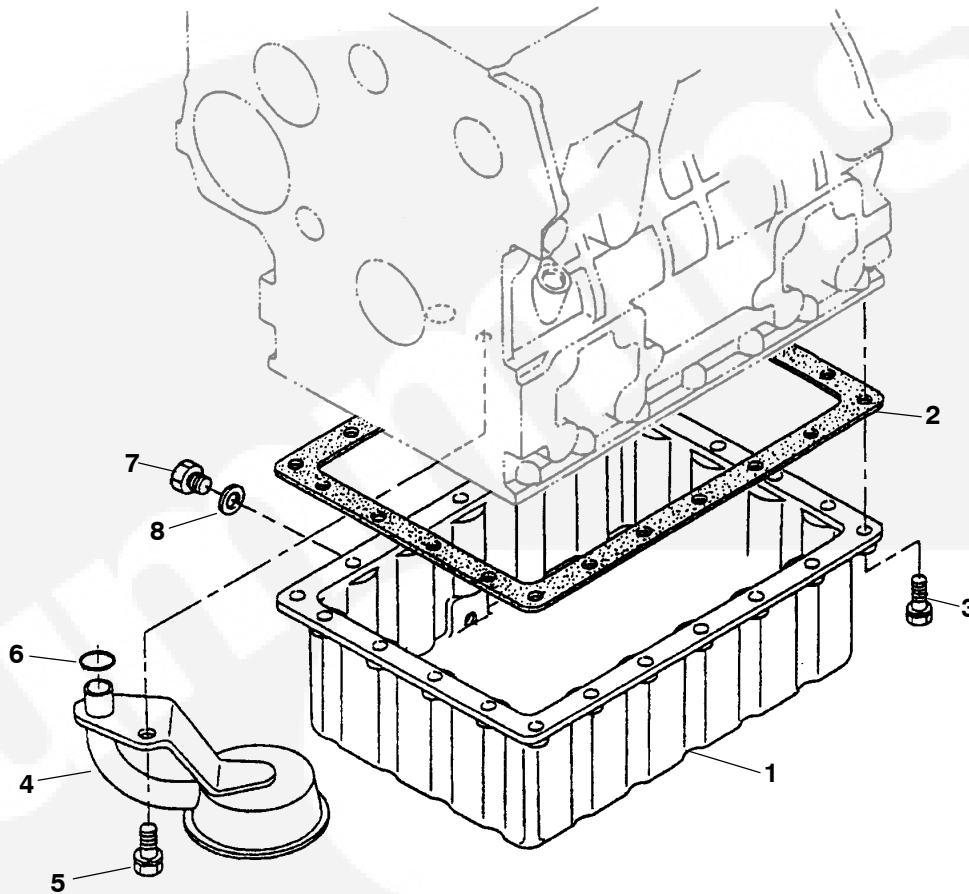


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	502-1123	1	Cap, Pipe
2	501-0910	1	Hose, Oil Drain
3	502-0263	1	Elbow, Pipe(MDKBL)
4	102-1485	1	Adapter, Oil Drain (MDKBL)
5	185-5495	1	Gasket, Oil Drain (MDKBL)
6	502-0075	1	Elbow, Pipe (MDKBM and MDKBN)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
7	193-0244	1	*Sender, Oil Pressure Negative Ground (B200 B201)
	193-0430-01	1	+ Isolated Ground (B380)
8	505-0395	1	Reducer, Bushing (1/8" NPSF)

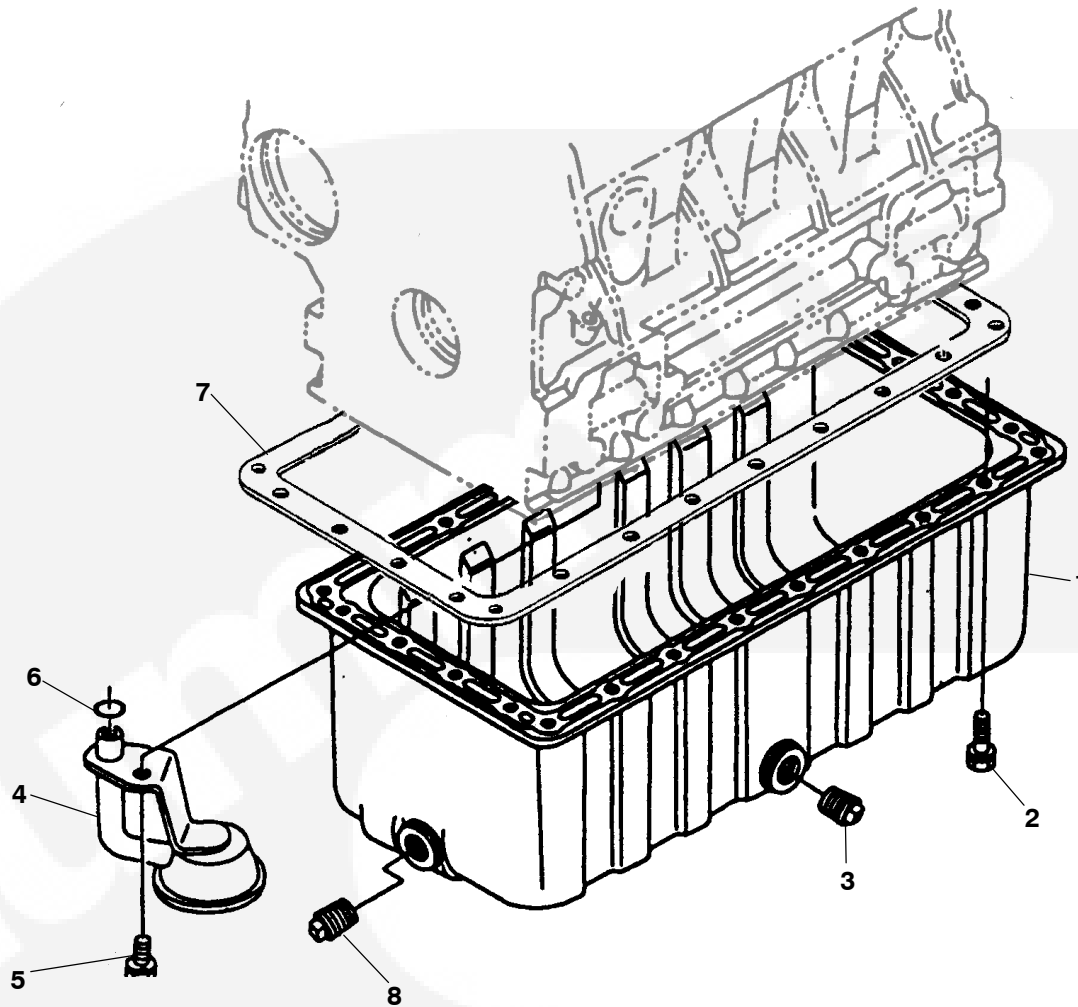
* - Sender Included in Sender Kit Listed on Water Flange Page.
+ - Sender Included in Isolated Ground Kit Listed on Isolated Ground Page.

Oil Pan MDKBL



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	185-7213	1	Pan, Oil	6			O'Ring
2	185-7214	1	Gasket, Oil Pan	185-3078	1		Spec A-D
3	185-2389	22	Screw, Hex Head	185-7421	1		Begin Spec E
4			Tube, Oil Pickup	7			Plug
	185-7215	1	Spec A-D	185-2096	1		Spec A-D
	122-0932	1	Begin Spec E	517-0418	1		Begin Spec E
5	185-6762	1	Bolt	8			Gasket
				185-2343	1		Spec A-D
				509-0428	1		Begin Spec E

Oil Pan MDKBM and MDKBN (Spec A-D)

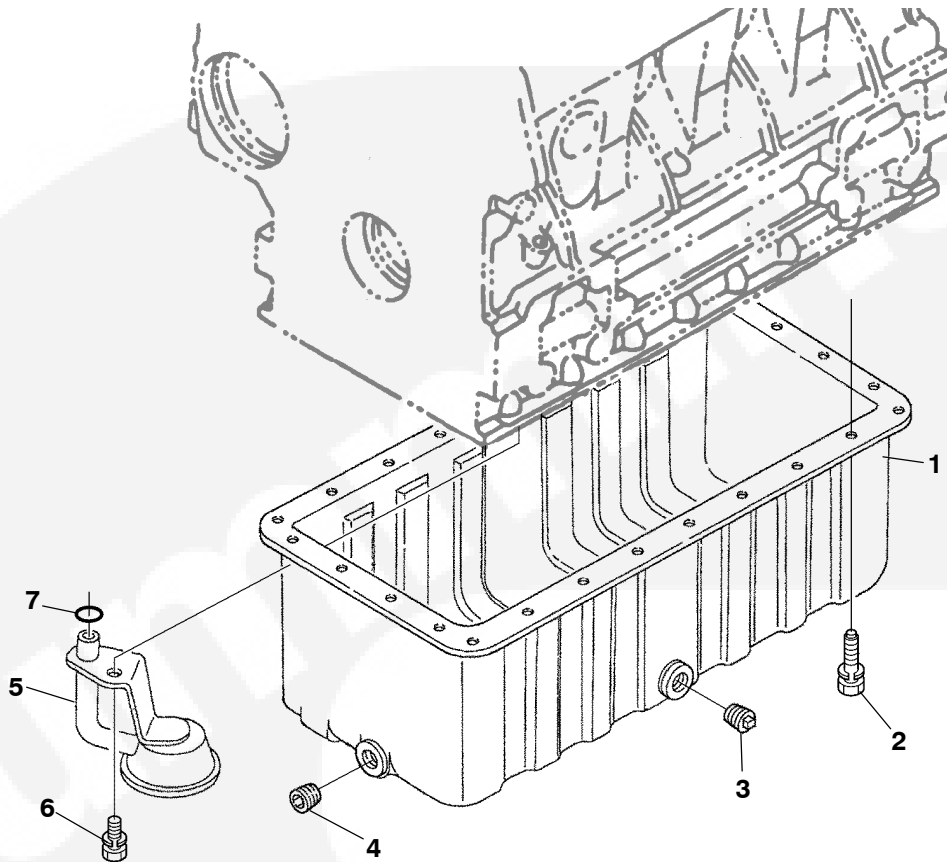


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7246	1	Pan, Oil MDKBM, MDKBN
2			Bolt MDKBM, MDKBN
	185-2386	26	Spec A
	800-6505	26	Spec B-D
3			Plug MDKBM, MDKBN
	185-5826	2	MDKBM, MDKBN
4			Tube, Oil Pickup MDKBM, MDKBN (Spec A)
	185-7247	1	MDKBM, MDKBN (Spec A)
	181-9128	1	MDKBM, MDKBN Spec B-D
5	185-6762	1	Bolt

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
6	185-3078	1	O'Ring
7			*Gasket, Oil Pan MDKBM, MDKBN
	185-5478	1	MDKBM, MDKBN
8			Plug (MDKBM, MDKBN)
	185-5826	1	Spec A
	102-1511	1	Spec B-D

* - Or Use Three Bond #1207D or #TB1216.

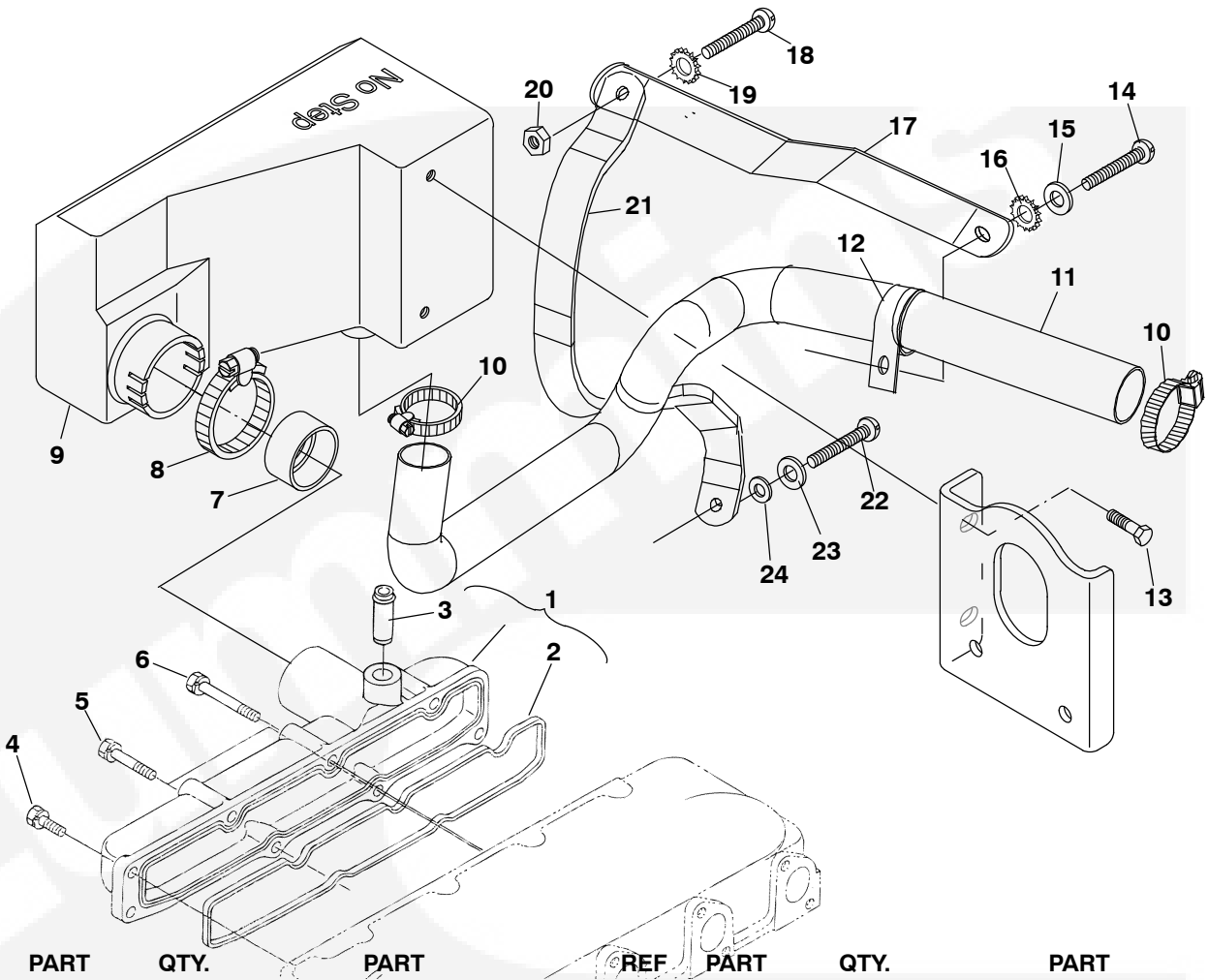
Oil Pan MDKBM and MDKBN (Begin Spec E)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	185-7246	1	Pan, Oil
2	181-9094	26	Bolt
3	817-0441	1	Plug
4	181-9230	1	Plug

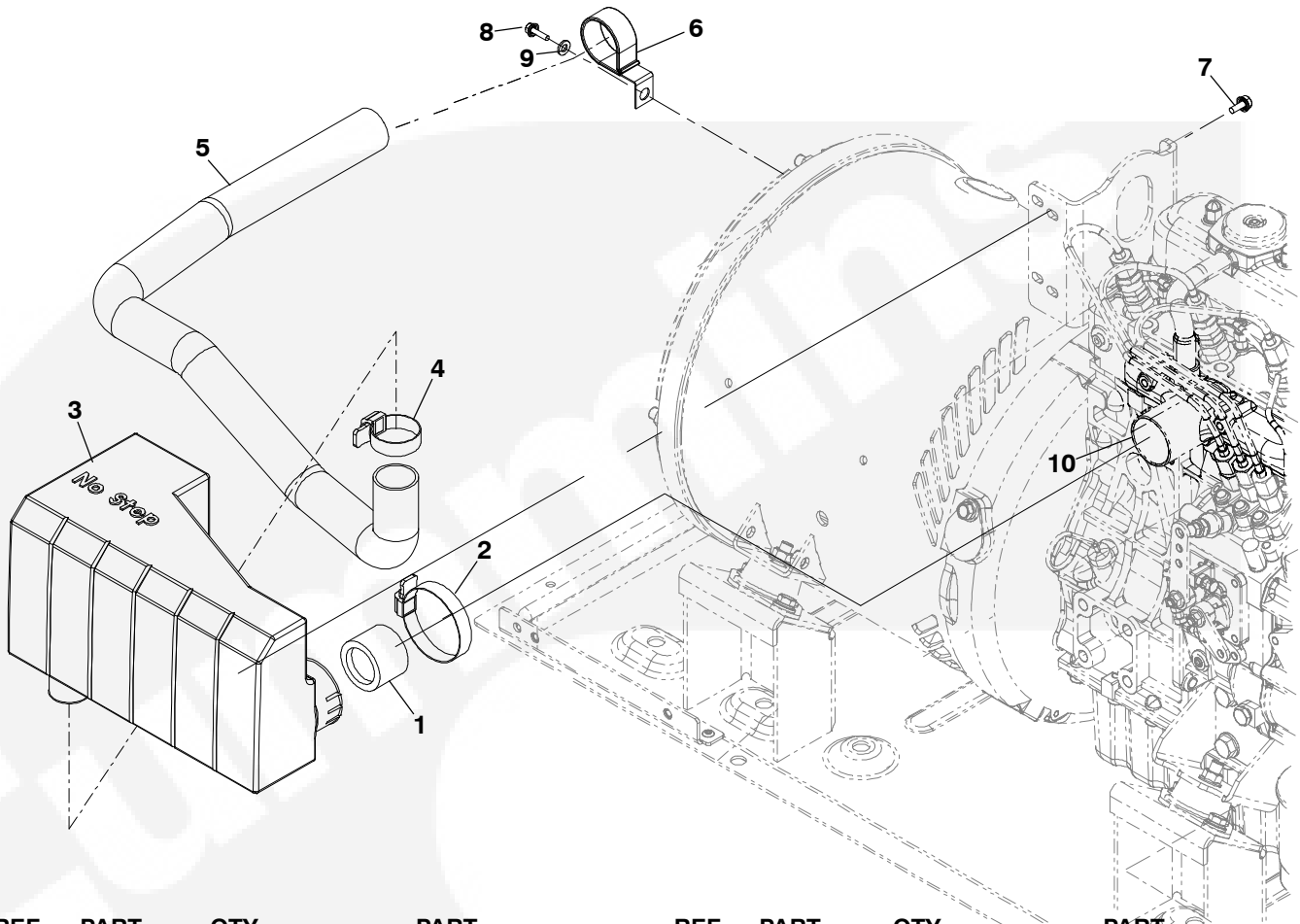
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
5	123-2414	1	Tube, Oil Pickup
6	185-2563	1	Bolt
7	185-7421	1	O'Ring, Seal

Resonator (Spec A-C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-3239	1	Kit, Resonator (Includes Instructions)	7	140-2898	1	Sleeve, Air Intake
			Manifold, Intake (Includes Gasket)	8	503-1141	1	Clamp, Hose
	185-6927	1	Spec A	9	140-3078-01	1	Resonator, Intake
	181-9189	1	Begin Spec B	10	503-1137	2	Clamp, Hose
2			MDKBL	11	503-2202-01	1	Hose, Air Intake (1.25" ID)
	185-6700	1	Spec A	12	130-4830	1	Clamp
3	181-9110	1	Begin Spec B	13	821-6002-02	2	Screw, Hex Head Sems (M6 x 12)
			Gasket	14	821-6001-03	1	Screw, Hex Head (M5 x 0.8 x 16mm)
	185-6926	1	MDKBL	15	526-2291	2	Washer, Flat
4	185-6701	1	MDKBM, MDKBN	16	856-0003	1	Washer, EIT (M10)
	185-6499	1	Joint, Breather Pipe	17	337-0081	1	Strap, Bond (.75 x 7.50")
5			Begin Spec B	18	810-0155	1	Screw, Slotted Round Head Brass (1/4-20 x 1.25")
	185-2389	3	Screw, Hex Head (M6 x 18mm)	19	856-0006	2	Washer, EIT (1/4")
6			Screw	20	871-0016	2	Nut, Hex Brass (1/4-20)
	185-6677	1	MDKBL	21	337-3507	1	Strap, Bond (12.7 x 412.7mm)
	185-6677	2	MDKBM, MDKBN	22	800-3042	1	Screw, Hex Head Cap (M4 X 10mm)
			Screw, Hex Head (M6 x 50mm)	23	856-0002	1	Washer, EIT (#8)
	185-7069	2	MDKBL	24	526-2050	1	Washer, Flat (M4)
	185-7069	3	MDKBM, MDKBN				

Resonator (Begin Spec D)

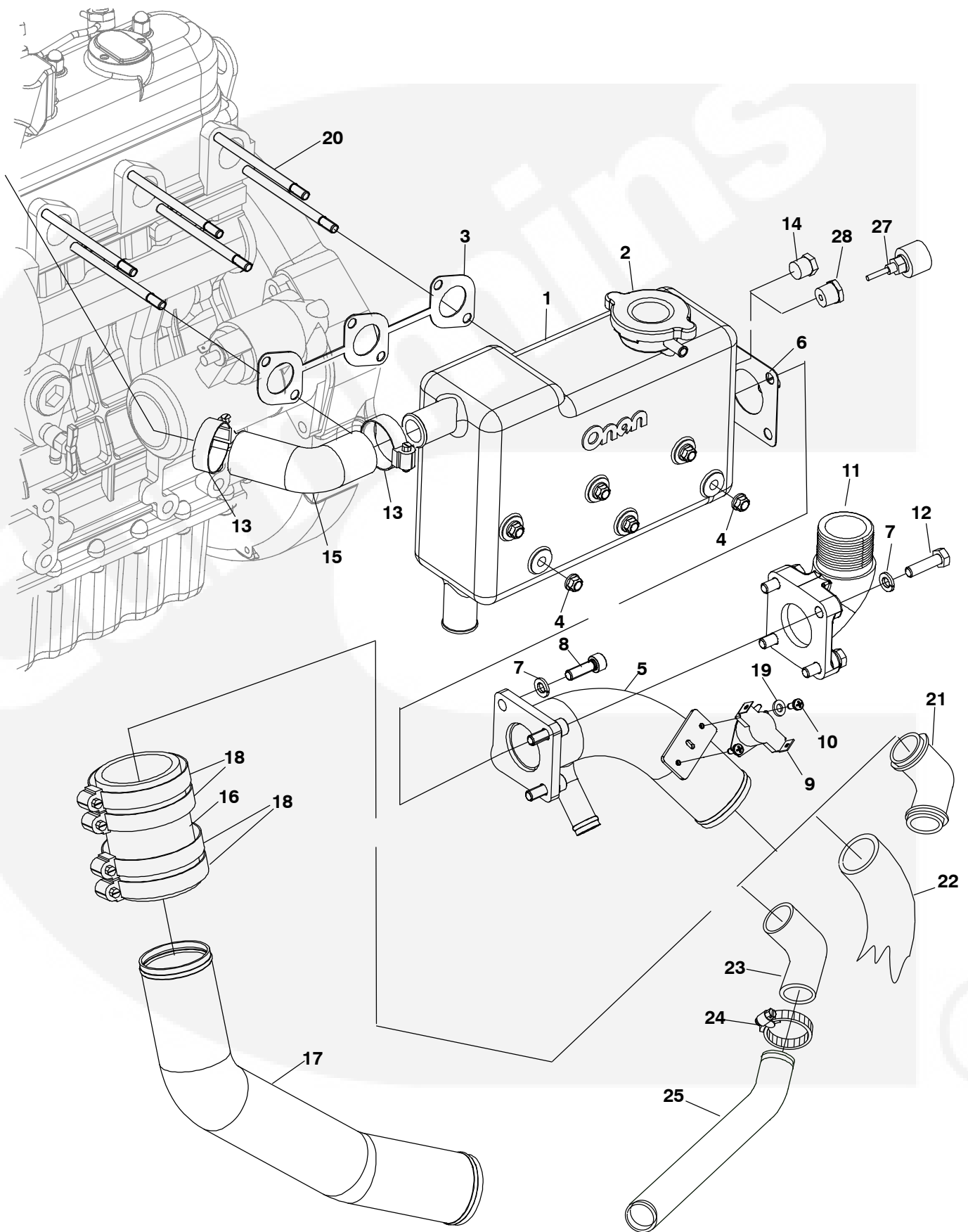


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-2898	1	Sleeve, Air Intake	8	821-6001-03	1	Screw, Hex Head (M5 x 0.8 x 16mm)
2	503-1141	1	Clamp, Hose	9	526-2291	1	Washer, Flat
3	140-3078-01	1	Resonator, Intake	10	-	1	See Intake Manifold Spec A-C for Manifold Screws Gasket and Manifold
4	503-1137	1	Clamp, Hose				
5	503-2202-01	1	Hose, Air Intake (1.25" ID)				
6	503-2790	1	Clamp				
7	821-6002-02	2	Screw, Hex Head Sems (M6 x 12)				

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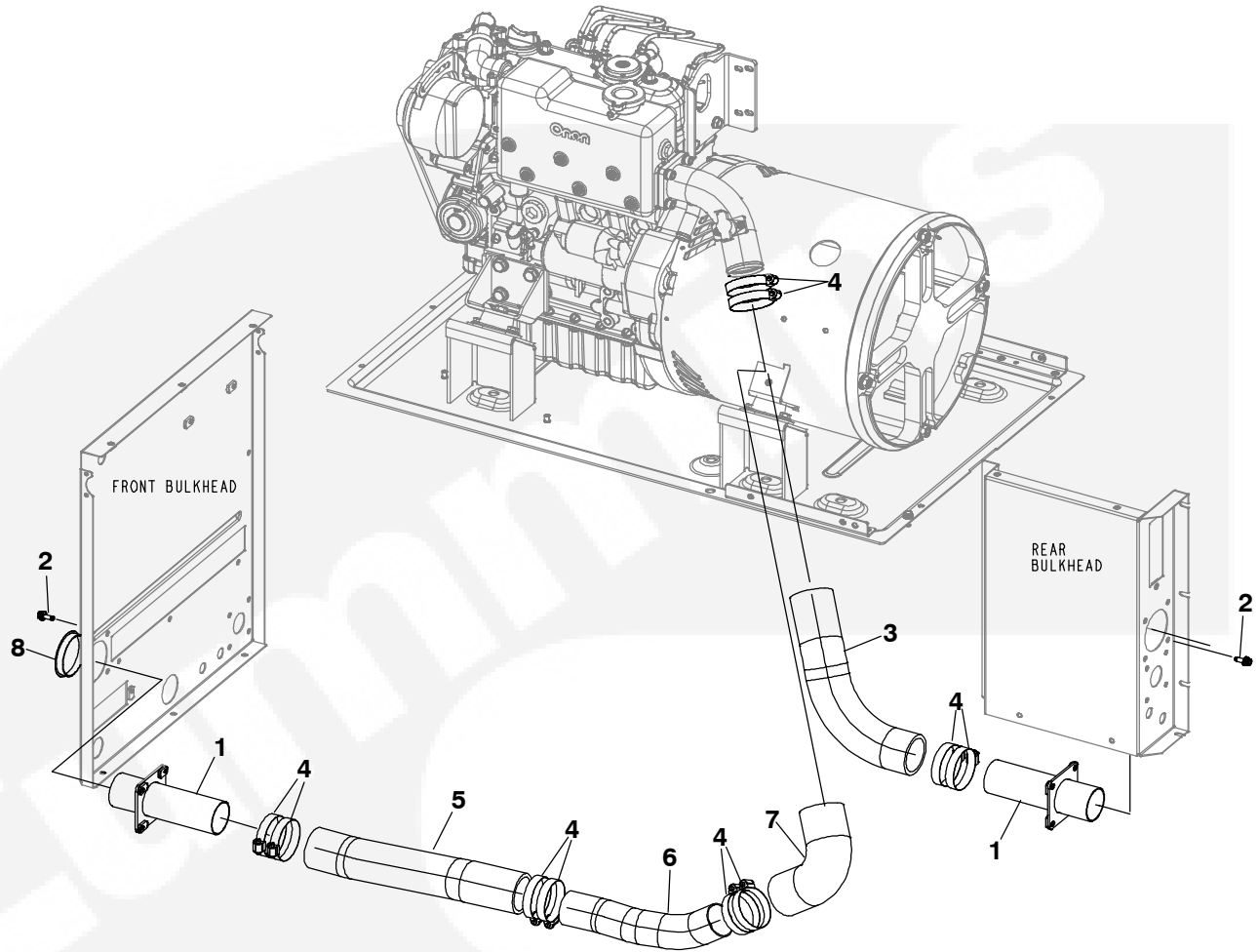
Exhaust Manifold



Exhaust Manifold

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	541-0599	1	Kit, Marine Muffler				(M4 x 10mm) (Wet)
	155-3147	1	Kit, Marine Muffler	11	155-2666-01	1	+ Elbow, Exhaust (Dry Exhaust)
	155-2355-02	1	Kit, Exhaust Tube	12	800-3017-21	4	Screw, Hex Head Cap (Dry Exhaust) (M8 x 30mm)
	155-3146	1	Kit, Dry Exhaust (Includes Parts Marked +)	13	503-1137	2	Clamp Hose
	155-3240	1	Kit, Front Exhaust (Includes Parts Marked*)	14			Plug, Pipe
	300-4686-01	1	Kit, Low Coolant Sender (Includes Sender Harness)		502-0153	1	MDKBL
1			Manifold Assy (Includes Filler Neck)		502-0820	1	MDKBM, MDKBN
	154-3020-01	1	MDKBL	15	503-2046	1	Hose, Coolant
	154-3060	1	MDKBM, MDKBN	16	503-2249	1	Hose, Exhaust (Wet)
2	130-3721	1	Cap, Radiator	17			Tube, Exhaust (Wet)
3			Gasket, Exhaust Manifold Spec A-D		155-3522	1	MDKBL
	185-6925	1	MDKBL		155-3523	1	MDKBM, MDKBN
	185-6854	1	MDKBM, MDKBN	18	503-1142	4	Clamp, Hose (Wet)
			Begin Spec E	19	526-0003	2	Washer, Flat (Wet)
	154-2369	1	MDKBL	20			Stud
	154-3270	1	MDKBM, MDKBN		185-7110	6	MDKBL
4			Nut, Hex Flange (M7 x 1mm) Spec A-D		185-7110	8	MDKBM, MDKBN
	185-6699	6	MDKBL	21	155-2033	1	Elbow, Exhaust (2")
	185-6699	8	MDKBM, MDKBN	22			Hose, Exhaust
			Begin Spec E		503-1963-04	1	2" x 3'
	185-6699	6	MDKBL		503-1963-05	1	2" x 5'
	185-6699	8	MDKBM, MDKBN		503-1353	1	2" x 10'
			Begin Spec E		503-1320	1	2" (Bulk)
	185-6699	6	MDKBL	23	503-1527	1	#*Elbow, Molded Exhaust
	185-6699	8	MDKBM, MDKBN	24	503-1142	4	#*Clamp, Hose
5	155-3261-02	1	Mixer, Elbow (Wet)	25			*Tube, Exhaust
6	185-6853	1	+ Gasket, Exhaust		155-3233	1	MDKBL (27")
7	850-0114-54	4	Washer, Lock (M8)		155-3256	1	MDKBM, MDKBN (30.5")
8	815-0916	4	Screw, Socket Head Cap (M8 x 1.25 x 25mm) (Wet)	26	508-0115	1	*Grommet
9	309-0295-01	1	Switch, Temperature (Wet)	27	193-0468	1	Sender, Low Coolant
10	815-0862	2	Screw, Pan Head XREC	28	502-0029-06	1	Bushing, Reducer 3/4 to 1/4" (MDKBM and MDKBN)

Bulkhead Exhaust (Spec B-C)

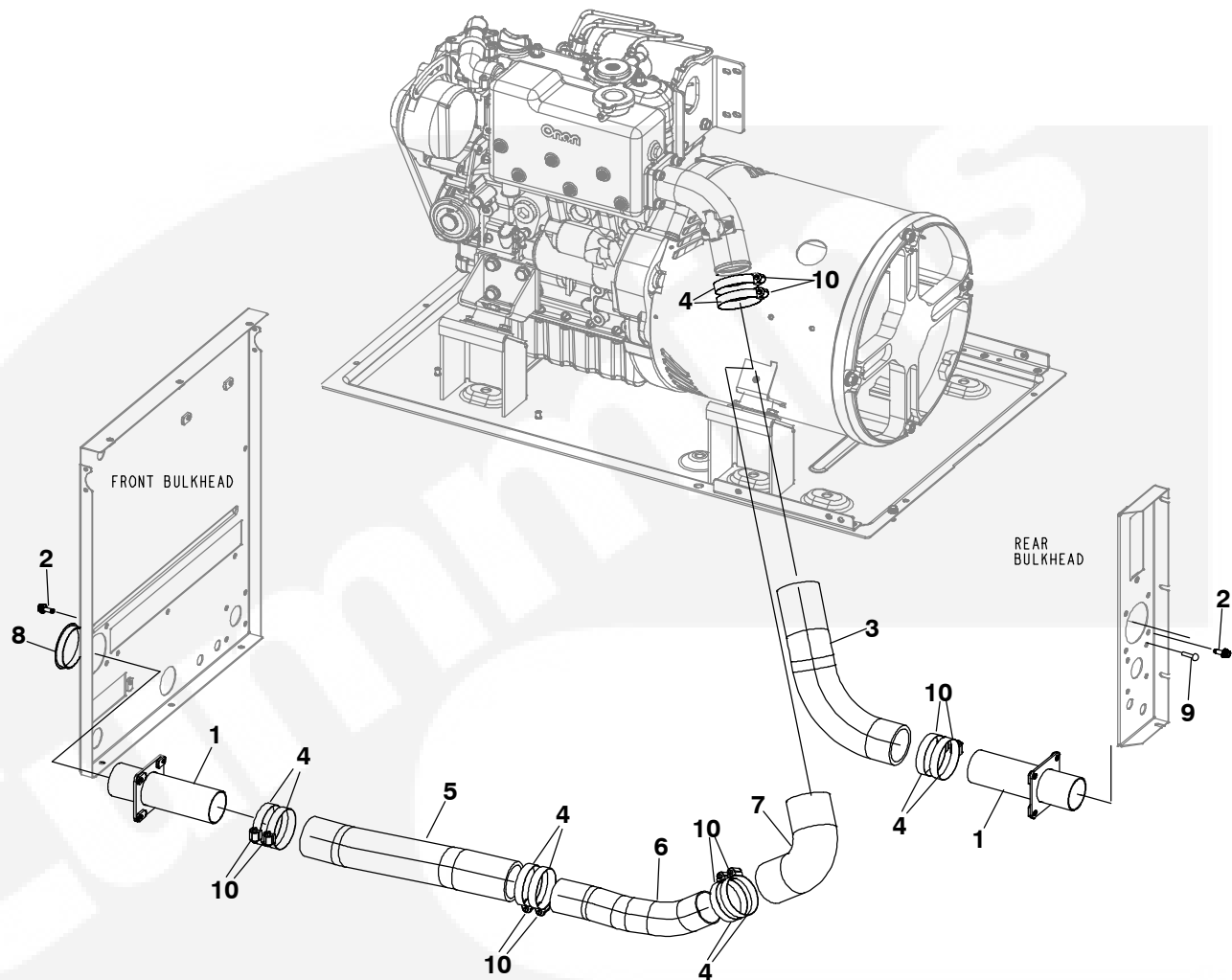


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	155-2030	1	Muffler, Exhaust (Not Shown)
1	405-7210	1	Connection, Bulkhead
2	821-6006-01	4	Screw, Hex Head Sems (M6 x 1.0 x 16mm)
3			Hose, Rear Exhaust
	503-2581	1	MDKBL
	503-2572	1	MDKBM and MDKBN
4			Clamp, Hose
	503-1142	8	Front, Housed
	503-1142	4	Rear

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
5			Hose, Front Housed Exhaust
	503-2575-01	1	MDKBL
	503-2575-02	1	MDKBM and MDKBN
6	155-4417	1	Tube, Front Housed Exhaust
7	503-2573	1	Hose, Front Exhaust
8	517-0138-09	1	Plug, Rear Housed Hole

* - Not noted if covers all three models.

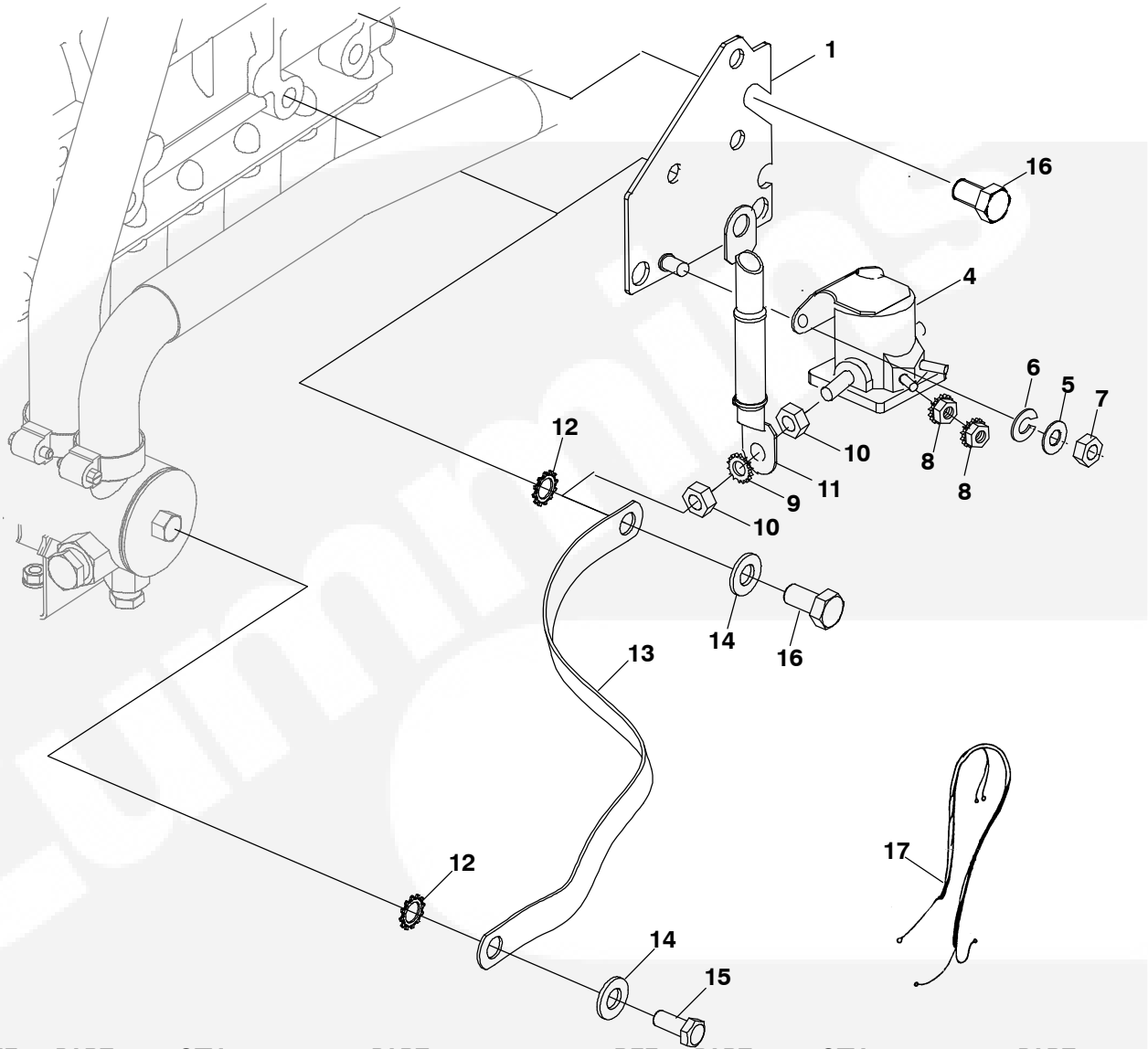
**Bulkhead Exhaust
(Begin Spec D)**



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	155-2030	1	Muffler, Exhaust (Not Shown)	6	155-4417	1	Tube, Front Housed Exhaust
1	404-0057	1	Connection, Bulkhead	7	503-2573	1	Hose, Front Exhaust
2	800-6395-01	4	Screw, Hex Head Sems (M6 x 1.0 x 16mm)	8	517-0138-09	1	Plug, Rear Housed Hole
3			Hose, Rear Exhaust	9	517-0131-02	4	Plug, Hole
	503-2581	1	MDKBL	10			Cover, Hose Clamp
	503-2572	1	MDKBM and MDKBN		503-2823	8	Front, Housed
4			Clamp, Hose		503-2823	4	Rear, Housed and Unhoused
	503-1142	8	Front, Housed				
	503-1142	4	Rear, Housed and Unhoused				
5			Hose, Front Housed Exhaust				
	503-2575-01	1	MDKBL				
	503-2575-02	1	MDKBM and MDKBN				

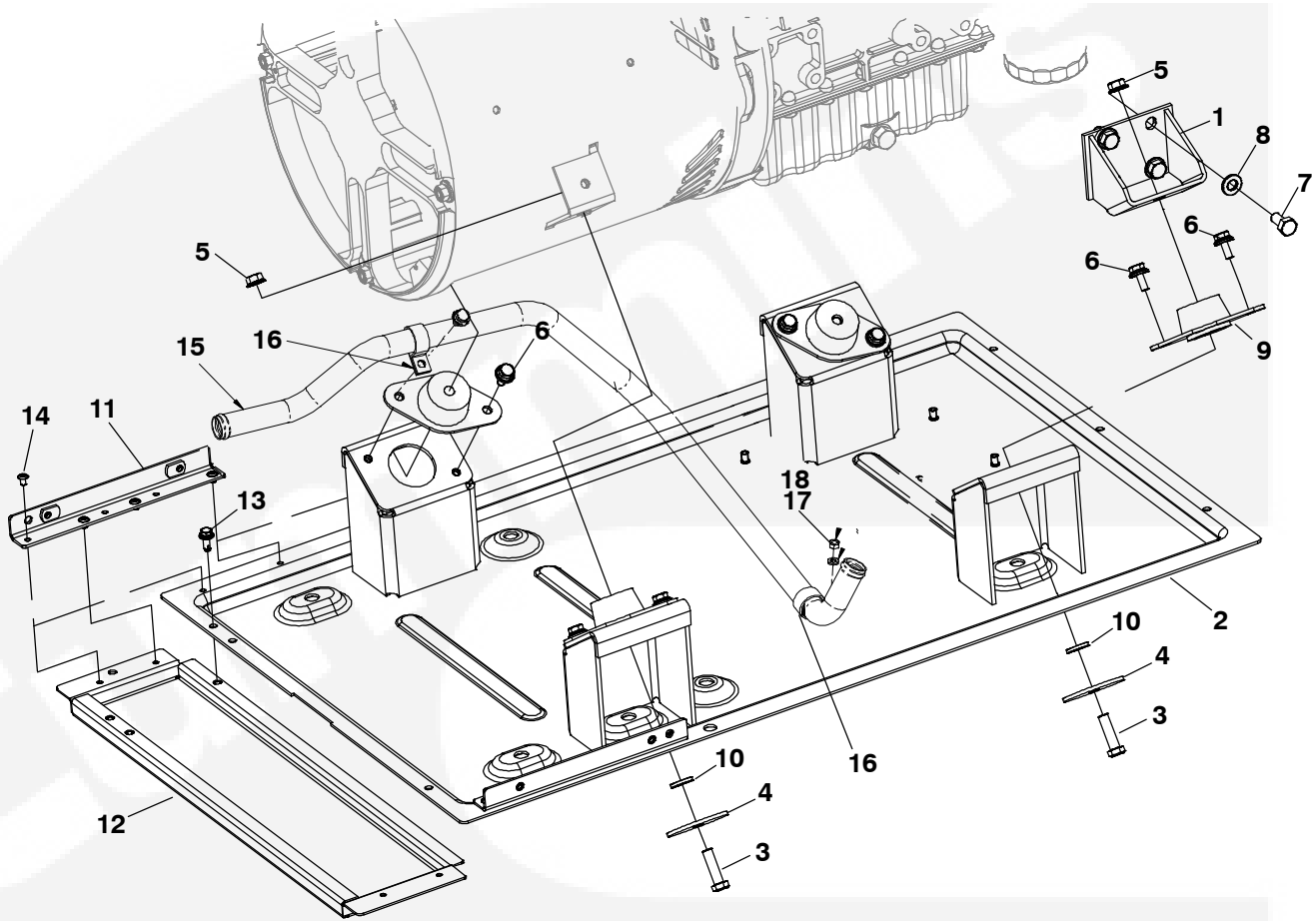
* - Not noted if covers all three models.

Isolation Ground



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	541-0822	1	Kit, Isolated Ground 12V (Includes Parts Marked+ and Instructions) (12V Isolated Gnd Only Parts Included Marked *)	10	862-0026-30	4	*Nut, Hex (5/16-24)
1	333-0732-02	1	*Bracket, Solenoid	11	338-4200-02	1	*Harness, Ground
2	-	1	+ Sender, Water Temp (See Water Flange Page)	12			Washer, ET Lock (5/16'')
3	-	1	+ Sender, Oil Pressure (See Oil System Page)		853-2010	1	12 and 24 Volt Ground
4	307-1617	1	*Relay, Solenoid (12V)		853-2010	2	12Volt Isolated Ground
5	526-0399-58	2	*Washer, Flat (M6)	13	337-3466-01	1	Strap, Bond
6	850-0114-53	2	*Washer, Split Lock (M6)	14			Washer, ET Lock (5/16'')
7	862-0026-54	2	*Nut, Hex (M6)		526-2120	2	12 and 24 Volt Ground
8	870-0131-01	4	*Nut, ET Hex (#10-32) (12V)		526-2120	1	12Volt Isolated Ground
9	853-0016	2	*Washer, ET Lock (5/16'')	15	800-0026	1	Screw, Hex Head Cap (5/16-18 x 3/4'')
				16			Screw, Hex Head Cap (M10 x 1.25 x 20mm)
					800-3030	1	12 and 24 Volt Ground
					800-3030	3	+ 12 Volt Isolated Ground
				17	338-4159	1	+ Harness, Isolated Ground

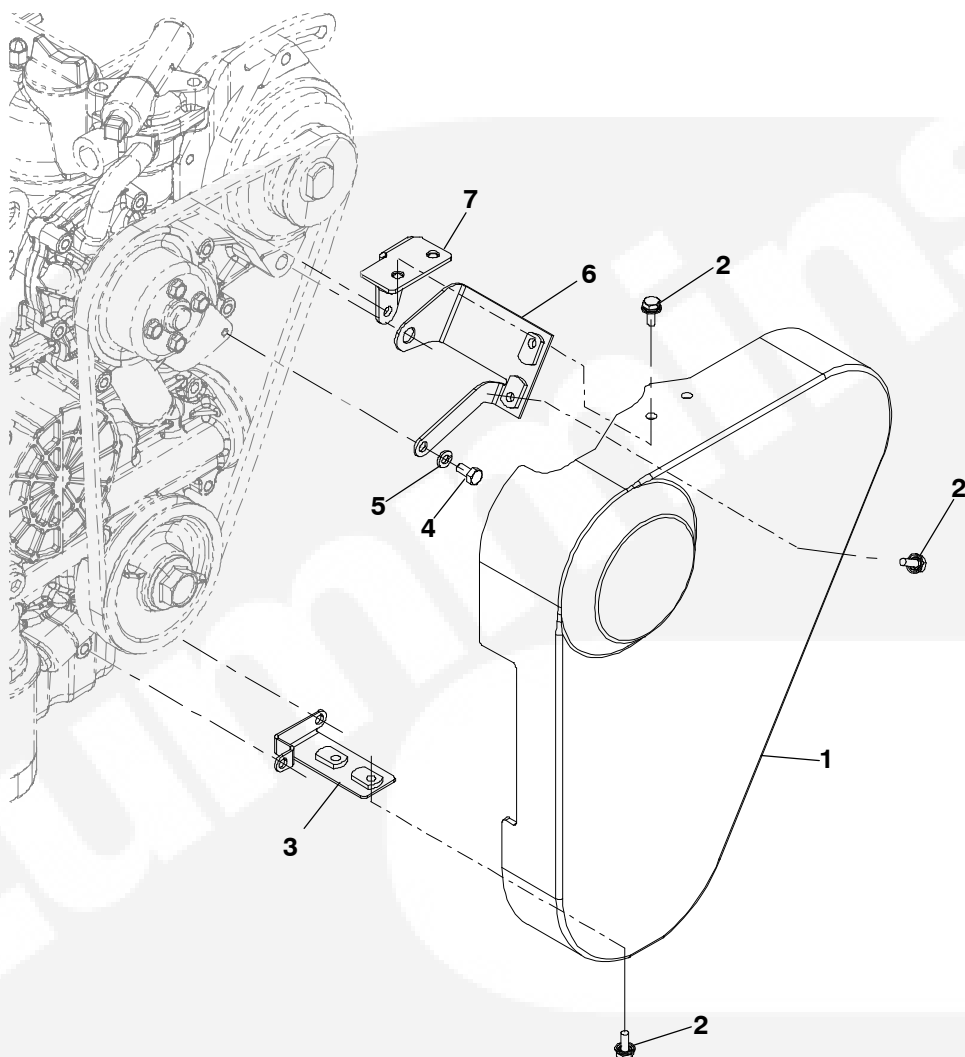
Mounting Base



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	403-6785-02	2	Mount, Engine
2	403-6402-03	1	Base, Mounting
	403-6402-04	1	MDKBL
			MDKBM and MDKBN
3	800-0573	4	Screw, Hex Head Cap (3/8-16 x 2.25")
4	526-2340	4	Washer, Flat
5	870-0550-09	4	Nut, Hex (3/8-16)
6	821-6003-02	8	Screw, Hex Head Sems (M8 x 1.25 x 16mm)
7	800-3030	8	Screw, Hex Head Cap (M10 x 1.25 x 20mm)
8	526-0399-62	8	Washer, Flat (M10)
9	402-0728	4	Isolator, Vibration
	402-0728-02	4	MDKBL (Blue Dot, 150lbs)
			MDKBM, MDKBN (Purple Dot, 215lbs)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
10	526-0030	4	Washer, Flat
11	405-6516-02	2	Housing, Bracket
	404-0044-02	2	Spec A-C
			Begin Spec D
12	405-6518-02	1	Extension, Mounting Base (MDKBM, MDKBN)
13	800-6395-01	2	Screw, Hex Head Sems Stainless (M6 1.0 x 16mm) (MDKBM, MDKBN)
14			Rivet, Pop
	818-0231-01	6	MDKBL
	818-0231-01	8	MDKBM, MDKBN
15	130-5448-02	1	Tube, Coolant
16	518-0546-42	2	Clamp, Hose
17	860-0114-63	1	Washer (m6)
18	862-0026-54	1	Bolt (M6)

Belt Guard

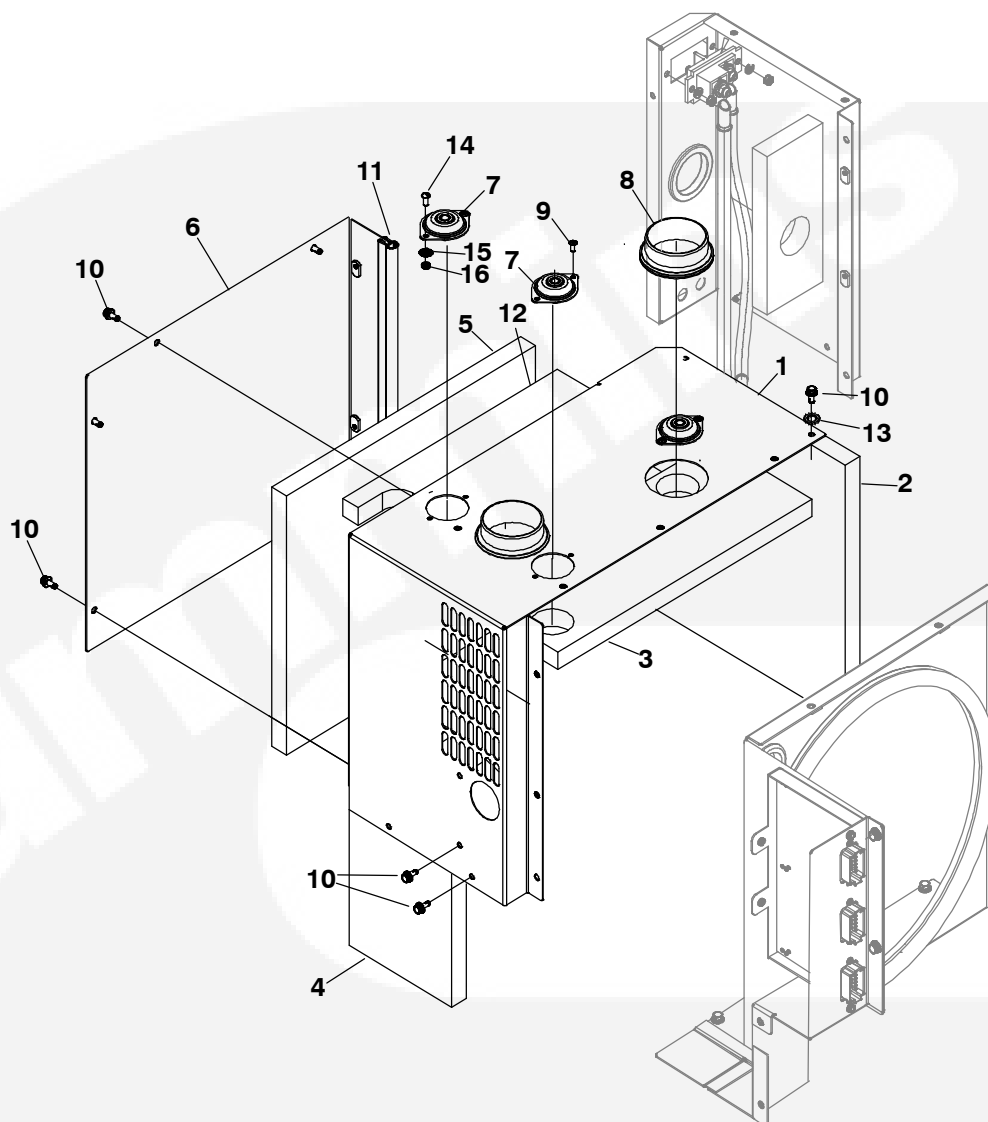


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	541-0590	1	Kit, Belt Guard
1	130-4870	1	Guard, Belt
2	821-6002-02	6	Screw, Hex Head Sems (M6 x 1 x.12mm)
3	130-4869-03	1	Bracket, Belt Guard Bottom
4	800-3017-02	1	Screw, Hex Head Cap (M6 x 1 x 12mm)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
5	850-0114-53	1	Washer, Lock (M6)
6	130-4945-03	1	Bracket, Belt Guard Side
7	130-4847-03	1	Bracket, Belt Guard Top

* - Unhoused Set Only.

Generator Sound Shield Housing (Spec A-B)



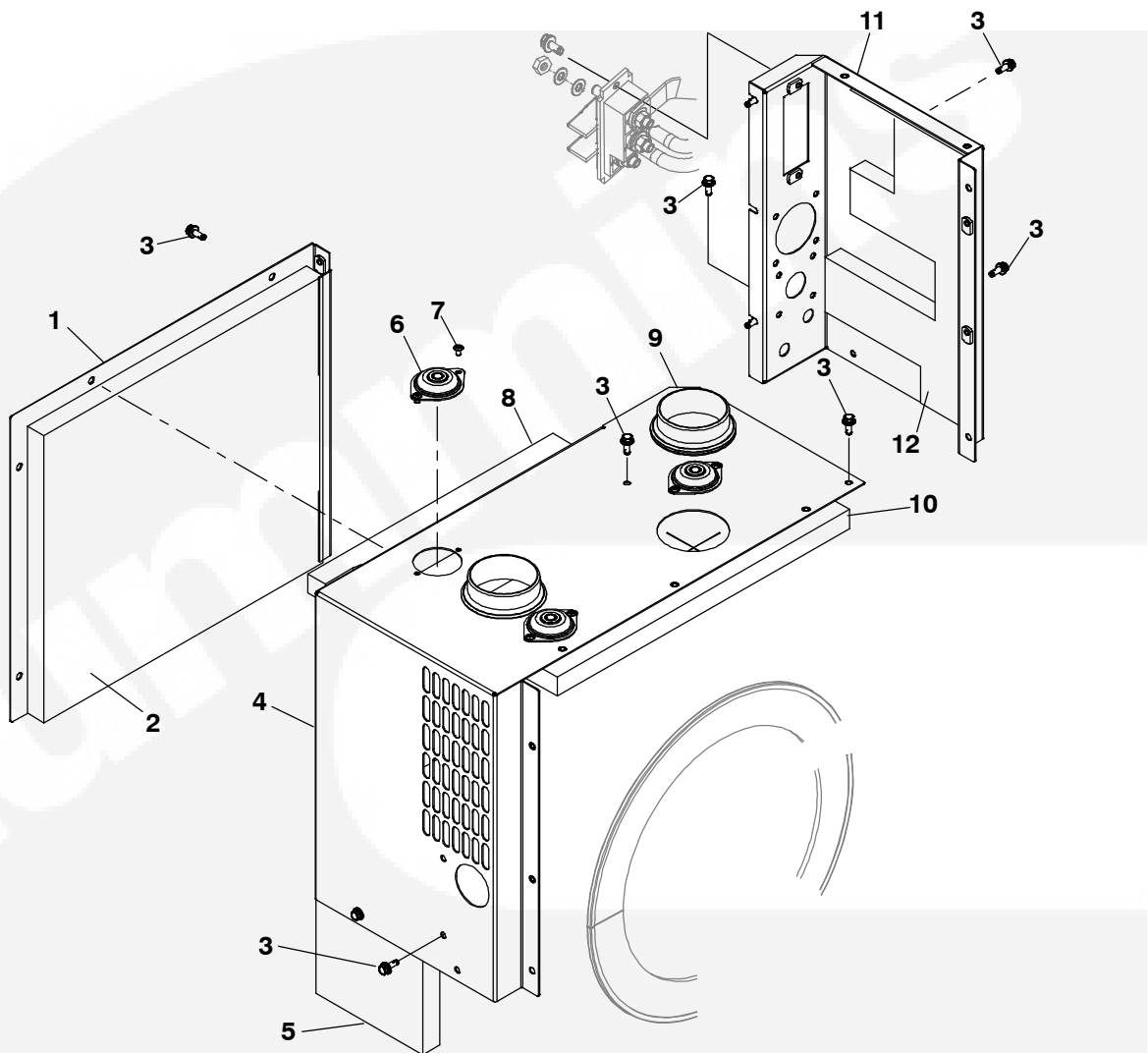
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-6491-03	1	Panel, Housing	10	821-6006-01	3	Screw, Hex Head Sems Stainless Steel (M6 x 1.0 x 16mm)
2	405-6682	1	Insulation, Housing	11	895-0402	1	Seal, Weather (1.25')
3	405-6685	1	Insulation, Housing (Top)	12	405-6686	1	Insulation, Housing
4	405-6684	1	Insulation, Housing	13	853-2006	3	Washer, Lock ETIT (M6)
5	405-6689	1	Insulation, Housing Rear Cover	14	813-0100	1	Screw, Hex Head Cap (M6 x 1 16mm)
6	405-6520-03	1	Cover, Rear	15	856-0003	1	Washer Eit (#10)
7	402-0681-01	3	Isolator, Vibration	16	870-0131	1	Nut, Sems Eit (#10-32)
8	508-1152	2	Grommet, Rubber				
9	818-0231-01	5	Rivet, Pop (.315 x 1.77")				

This exploded view diagram illustrates the assembly of a door. The main components are labeled as follows:

- 1**: Main door frame or panel.
- 2**: Screws used for mounting the frame.
- 3**: A rectangular panel or insert.
- 4**: A small circular component, possibly a gasket or seal.
- 5**: A mounting bracket or plate.
- 6**: A circular component, likely a handle or lock cylinder.
- 7**: A circular component, possibly a lock or latch.
- 8**: A small rectangular component, possibly a hinge or latch.
- 9**: A small circular component, possibly a gasket or seal.
- 10**: A small circular component, possibly a gasket or seal.
- 11**: A small rectangular component, possibly a hinge or latch.
- 12**: A small circular component, possibly a gasket or seal.
- 13**: A small circular component, possibly a gasket or seal.
- 14**: A small rectangular component, possibly a hinge or latch.
- 15**: A cable or wire assembly.
- 16**: A small circular component, possibly a gasket or seal.
- 17**: A small rectangular component, possibly a hinge or latch.
- 18**: A small circular component, possibly a gasket or seal.
- 19**: A small rectangular component, possibly a hinge or latch.
- 20**: A small circular component, possibly a gasket or seal.
- 21**: A small rectangular component, possibly a hinge or latch.
- 22**: A small circular component, possibly a gasket or seal.

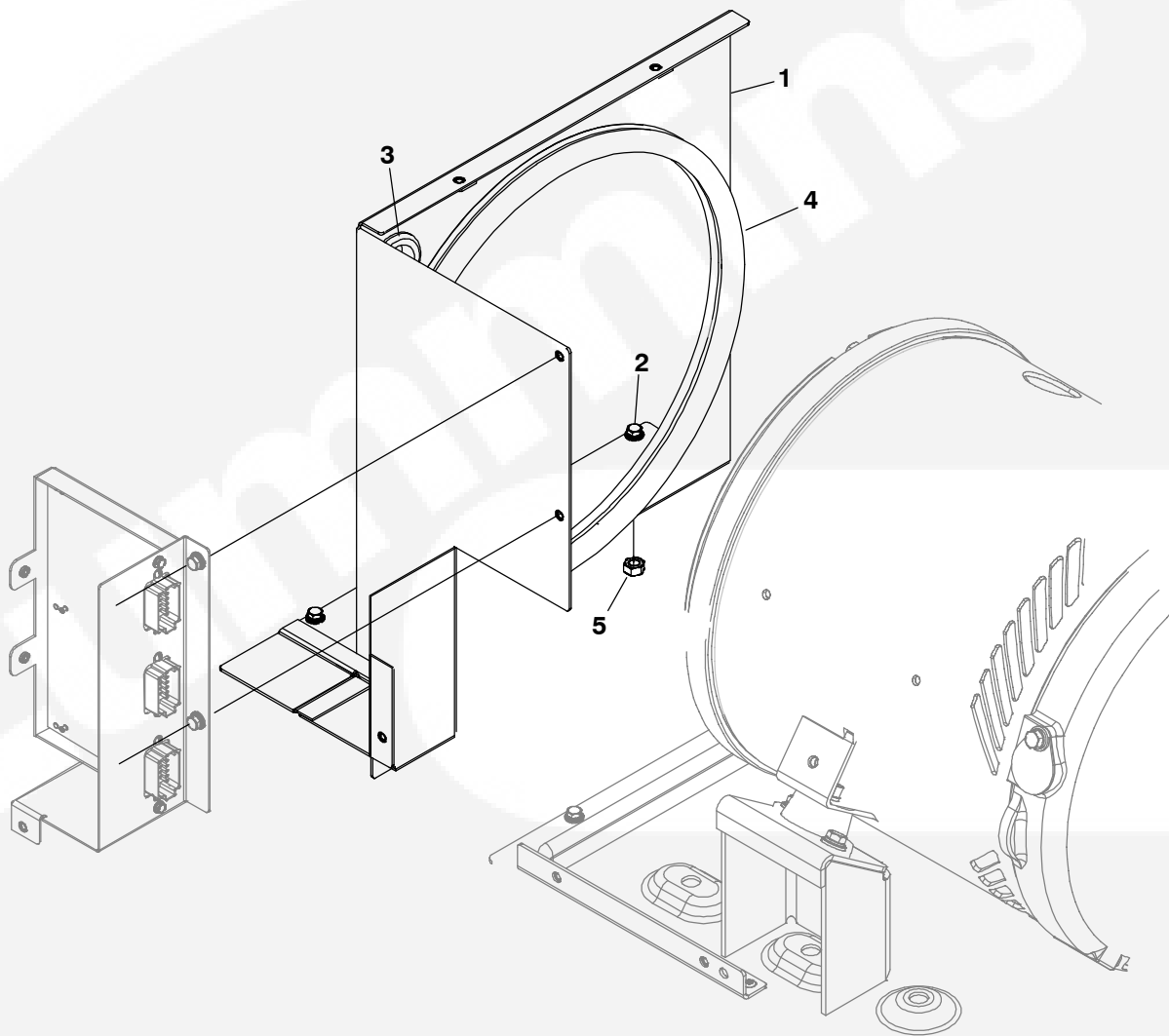
*_ Parts Included in Terminal Boot Kit.

Generator Sound Shield Housing (Spec C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-9047-03	1	Cover, Enclosure (Rear)	6	402-0681-01	3	Isolator, Vibration
2	405-9078	1	Insulation, Housing	7	818-0231-01	5	Rivet, Pop (.315 x 1.77")
3	821-6006-01	16	Screw, Hex Head Sems Stainless Steel (M6 x 1.0 x 16mm)	8	405-9079	1	Insulation, Housing
4	405-6491-03	1	Panel, Housing	9	508-1152	2	Grommet, Rubber
5	405-6684	1	Insulation, Housing	10	405-9129	1	Insulation, Housing
				11	405-8783-03	1	Panel, Housing
				12	405-9631	1	Insulation, Panel

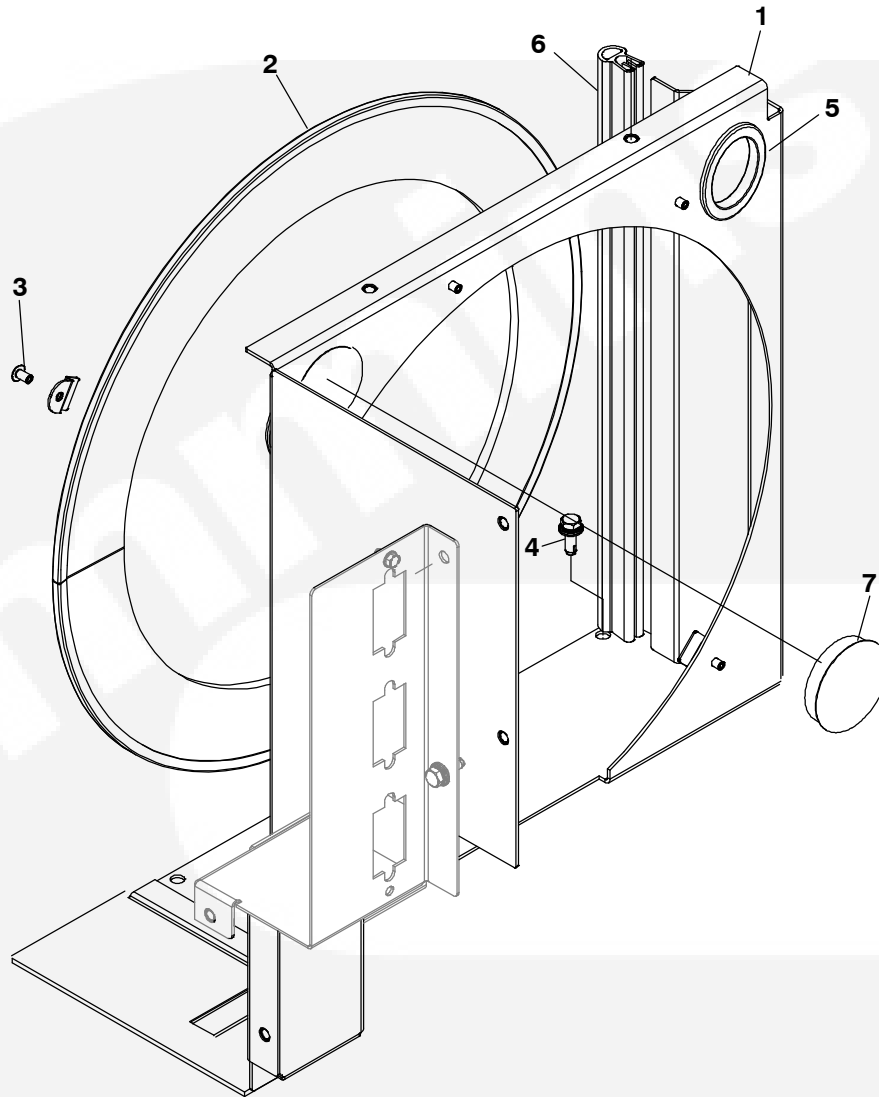
Generator Baffle (Spec A-B)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-6517-03	1	Baffle, Generator
2	821-6006-01	2	Screw, Hex Sems Stainless (M6 x 1 x 16mm)
3	508-1126	1	Grommet, Rubber

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
4	895-0381	1	Seal, Weather (3.6")
5	860-2057	2	Nut, Hex Mach (M6)

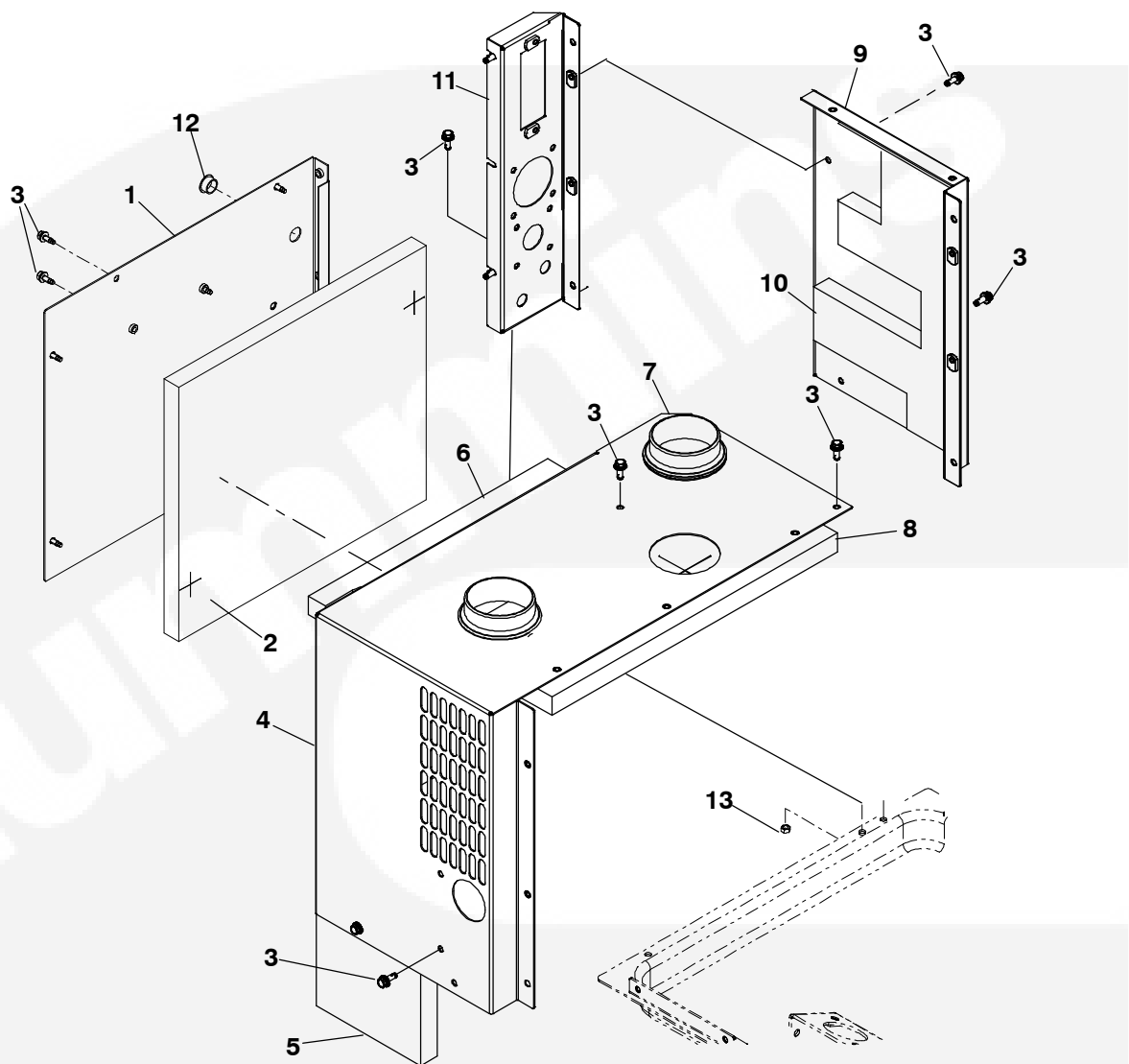
Generator Baffle (Spec C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-9077-03	1	Panel, Air Baffle
2	509-0368	1	Seal, Bush
3	818-0231-01	6	Rivet, Pop
4	821-6006-01	5	Screw, Hex Head Sems (M6 x 1.0 x 16mm)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
5	508-0051	1	Grommet, Rubber
6	895-0402	1	Seal, Weather (1.23')
7	517-0138-07	1	Plug, Hole

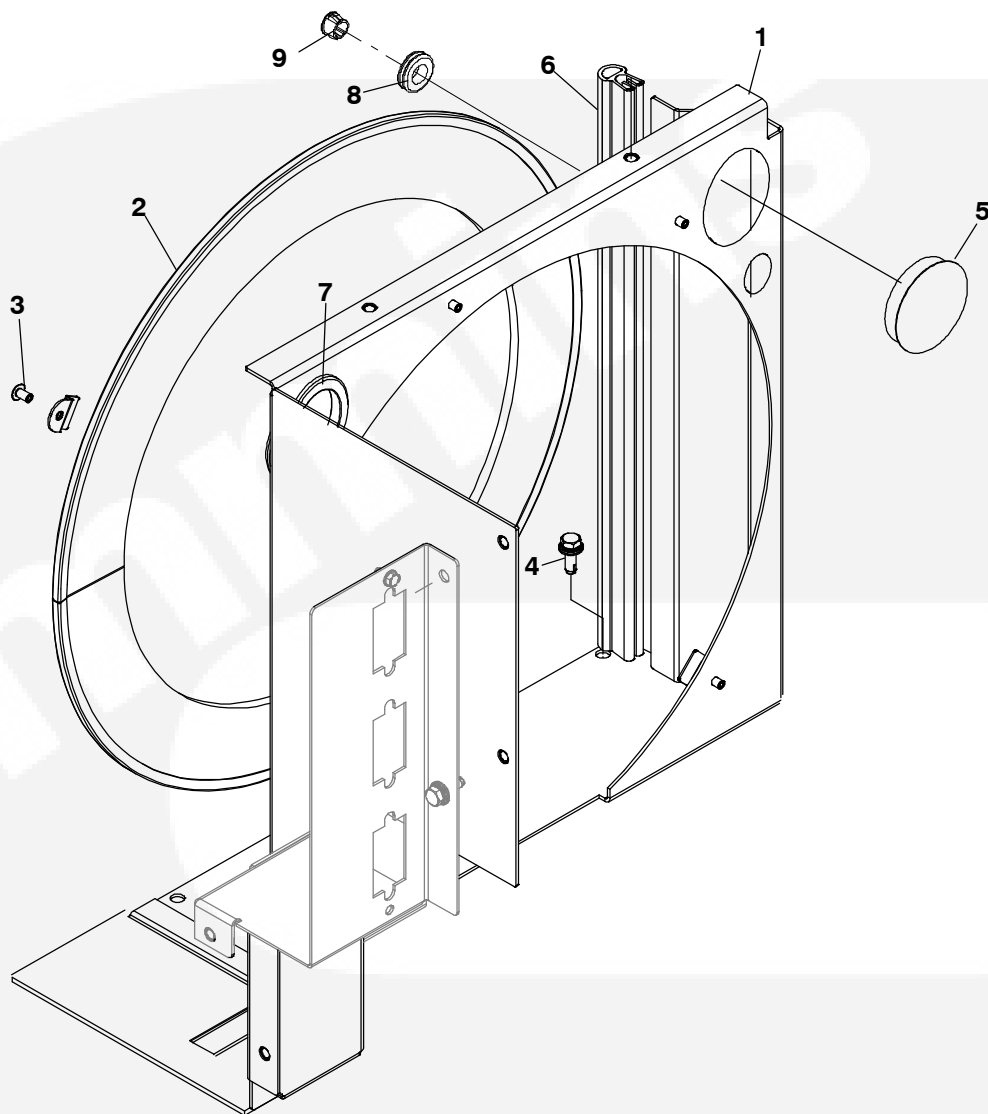
Generator Sound Shield Housing (Begin Spec D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	404-0021-03	1	Cover, Enclosure (Rear)
2	404-0045	1	Insulation, Housing
3	800-6395-01	16	Screw, Hex Head Sems Stainless Steel (M6 x 1.0 x 16mm)
4	404-0018-03	1	Panel, Housing
5	405-6684	1	Insulation, Housing
6	405-9079	1	Insulation, Housing

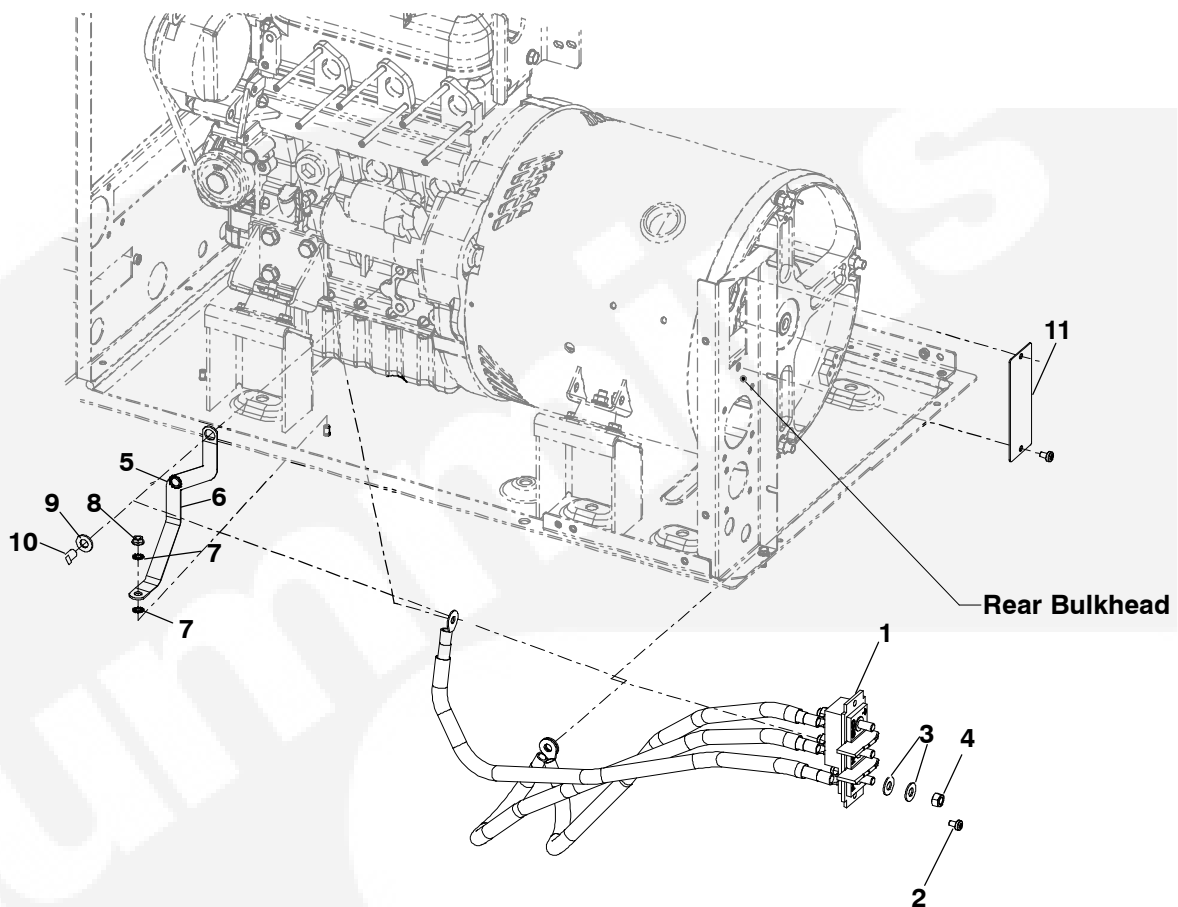
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
7	508-1152	2	Grommet, Rubber
8	405-9129	1	Insulation, Housing
9	404-0024-03	1	Panel, Housing
10	405-9631	1	Insulation, Panel
11	404-0019-03	1	Panel, Enclosure
12	517-0136	1	Plug, Hole
13	860-2057	2	Nut, Hex (M6 x 1mm)

Generator Baffle (Begin Spec D)



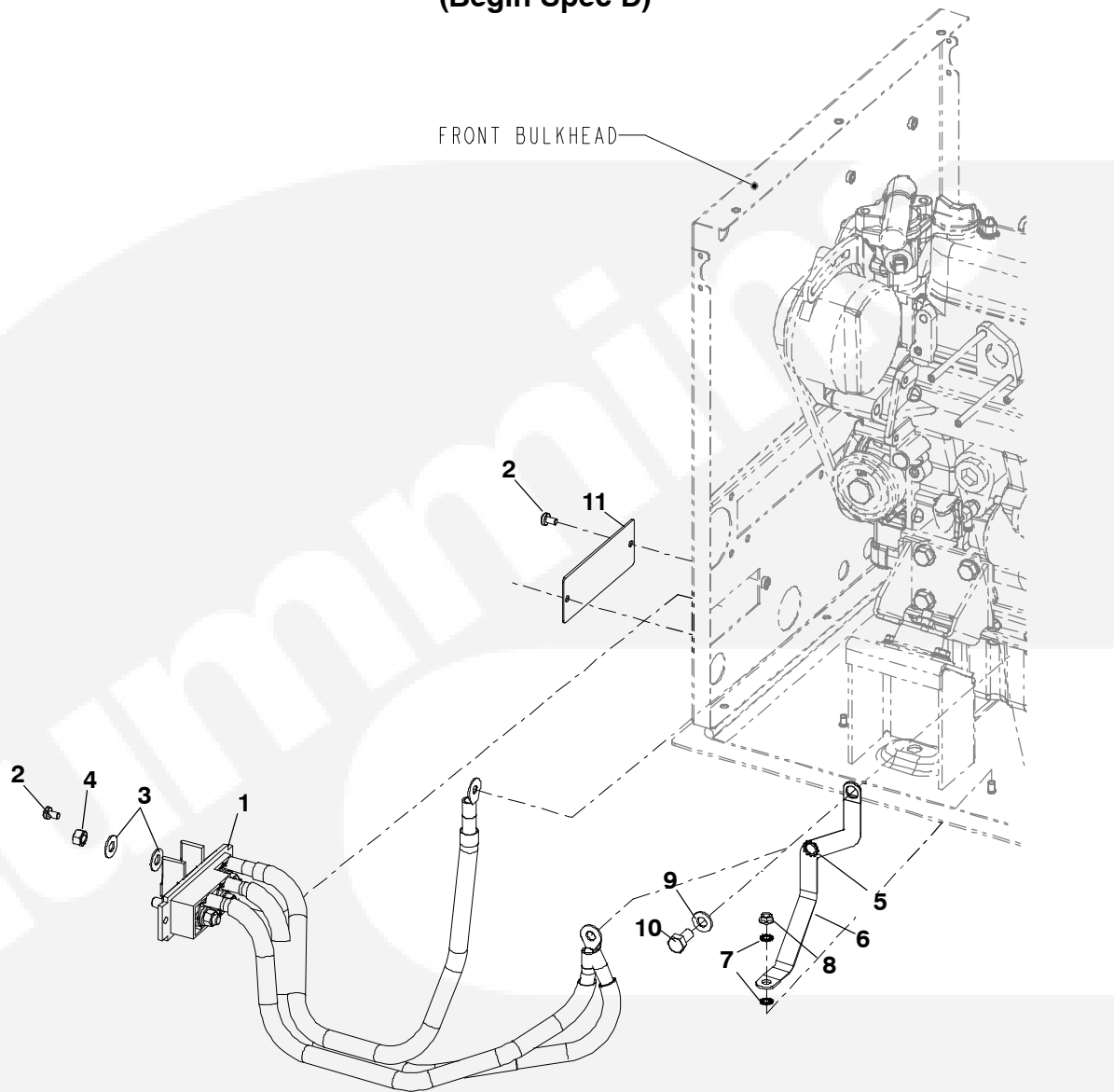
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	404-0020-03	1	Panel, Air Baffle	6	895-0402	1	Seal, Weather (1.23')
2	509-0368	1	Seal, Bush	7	508-1126	1	Grommet, Rubber
3	818-0231-02	6	Rivet, Pop	8	508-0021	1	Grommet
4	800-6395-01	5	Screw, Hex Head Sems (M6 x 1.0 x 16mm)	9	517-0133	1	Plug, Hole
5	517-0138-08	1	Plug, Hose				

Rear Bulkhead Battery Connection (Begin Spec D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	338-4622	1	Harness, Battery	5	853-2010	1	Washer, Lock EIT (M10)
2			Screw, Pan Head Torx (M6 x 1 x 10mm)	6	337-2785	1	Strap, Bond
	823-1002-03	4	Housed	7	853-2006	2	Washer Lock (M6)
	823-1002-03	2	Unhoused	8	185-6699-02	1	Nut, Hex Flange
3	526-0029	6	Washer, Flat (1/2")	9	526-2120	1	Washer, Flat (M10)
4	862-0003	3	Nut, Hex Heavy (3/8-16 UNC)	10	800-3030	1	Screw, Hex Head
				11	405-9764-02	1	Cover, Access Housed

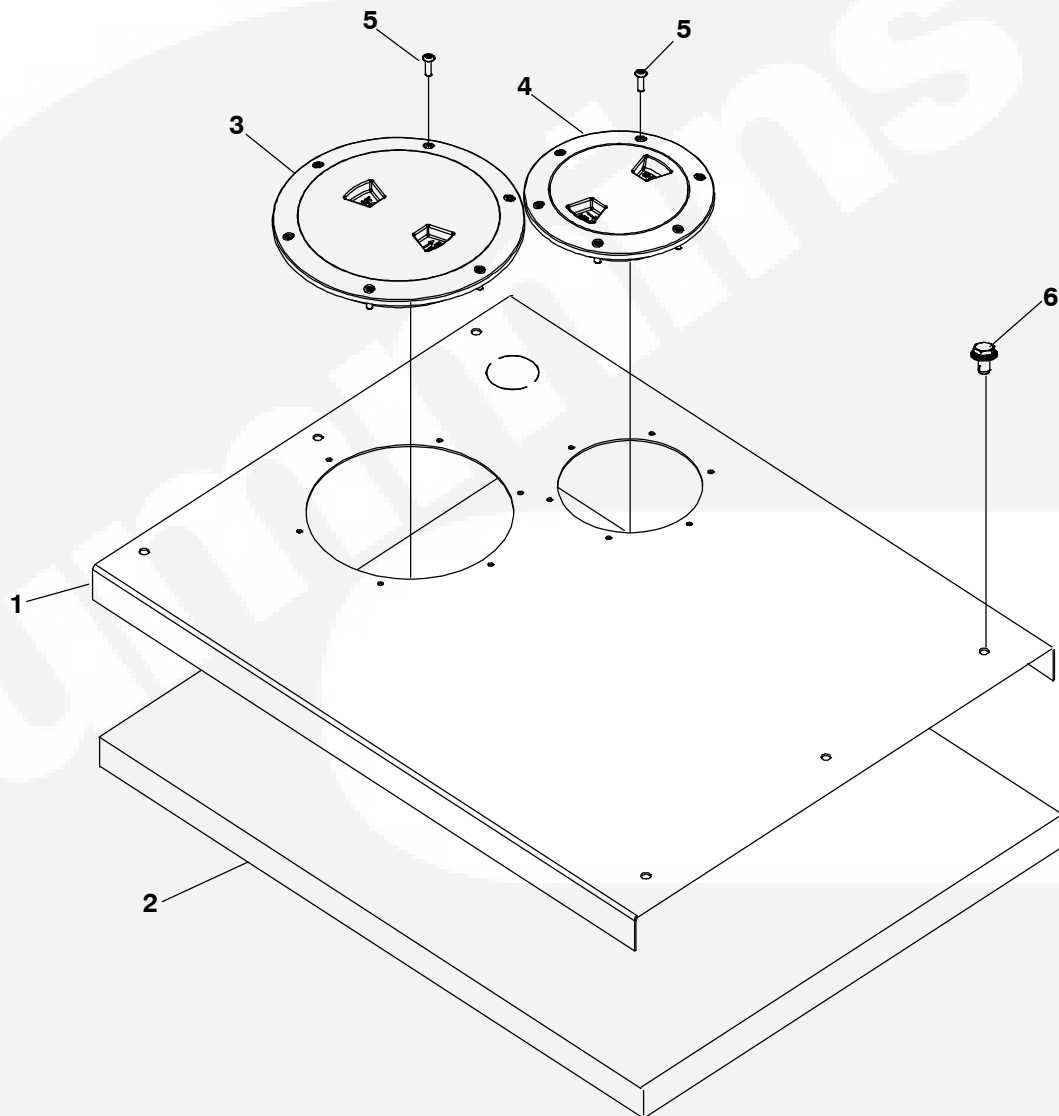
Front Bulkhead Battery Connection (Begin Spec D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	338-4622	1	Harness, Battery
2			Screw, Pan Head Torx (M6 x 1 x 10mm)
	823-1002-03	4	Housed
	823-1002-03	2	Unhoused
3	526-0029	6	Washer, Flat (1/2")
4	862-0003	3	Nut, Hex Heavy (3/8-16 UNC)
5	853-2010	1	Washer, Lock EIT (M10)

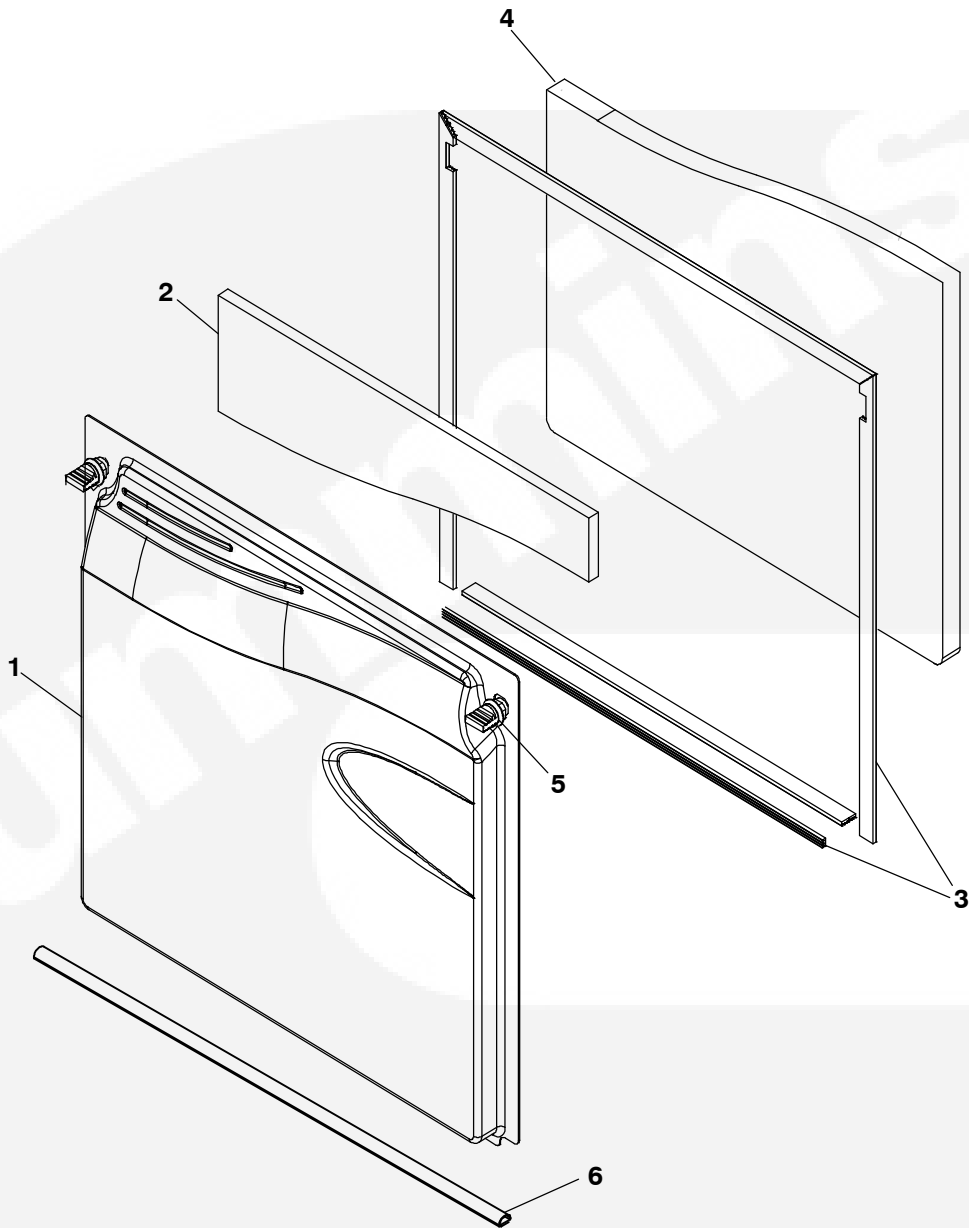
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
6	337-2785	1	Strap, Bond
7	853-2006	2	Washer Lock (M6)
8	185-6699-02	1	Nut, Hex Flange
9	526-2120	1	Washer, Flat (M10)
10	800-3030	1	Screw, Hex Head
11	405-9764-02	1	Cover, Access Housed

Engine Sound Shield (Spec A-C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			Kit, Sound Shield (Includes + for next 3 Pages)	2	405-6688	1	+ Insulation, Roof
	541-0588	1	MDKBL,	3	405-6340	1	+ Cover, Access
	541-0589	1	MDKBM MDKBN	4	405-6709	1	+ Cover, Access
	405-6959	1	Kit, Panel Roof	5	818-0239-03	12	+ Rivet, Pop
1	405-6524-03	1	+ Panel, Roof	6	821-6006-01	6	+ Screw, Hex Head Sems (M6 x 1 x 16mm)

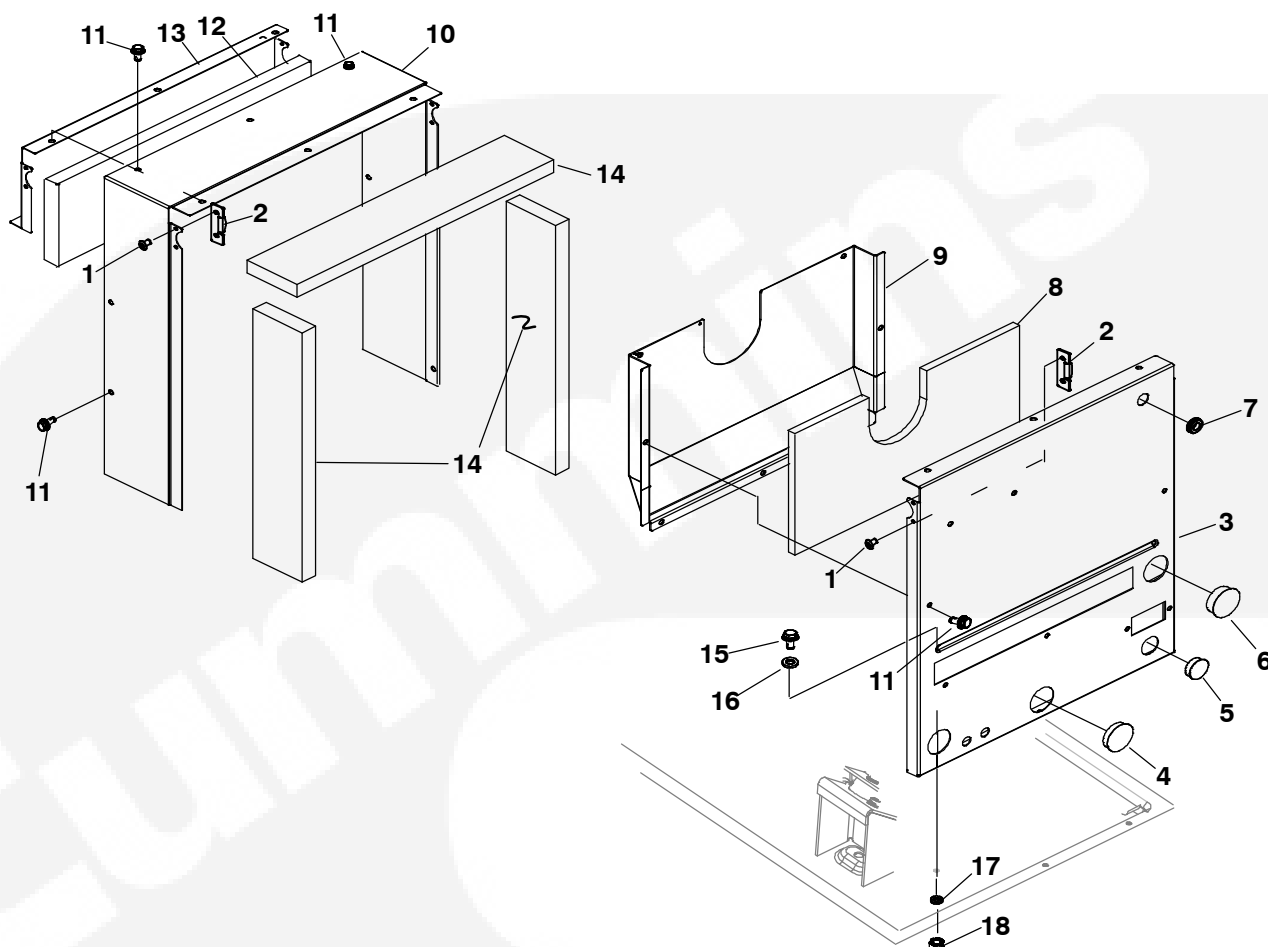
Engine Panel Sound Shield (Spec A-C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	405-6957	1	Kit, Door (Single Door)	6	895-0411	1	+ Weather, Seal (Spec C 2.5')
1	405-6519-03	1	+ Door, Sound Shield				
2	405-6797	1	+ Insulation, Door				
3	895-0395	1	+ Seal, Weather (15.6')				
4	405-6687	1	+ Insulation, Door				
5	406-0958	2	+ Latch, Door (1/4 Turn)				

+ - Parts Included in Sound Shield Kit Listed on Engine Sound Shield Page.

Engine Panel Sound Shield (Spec A-C)

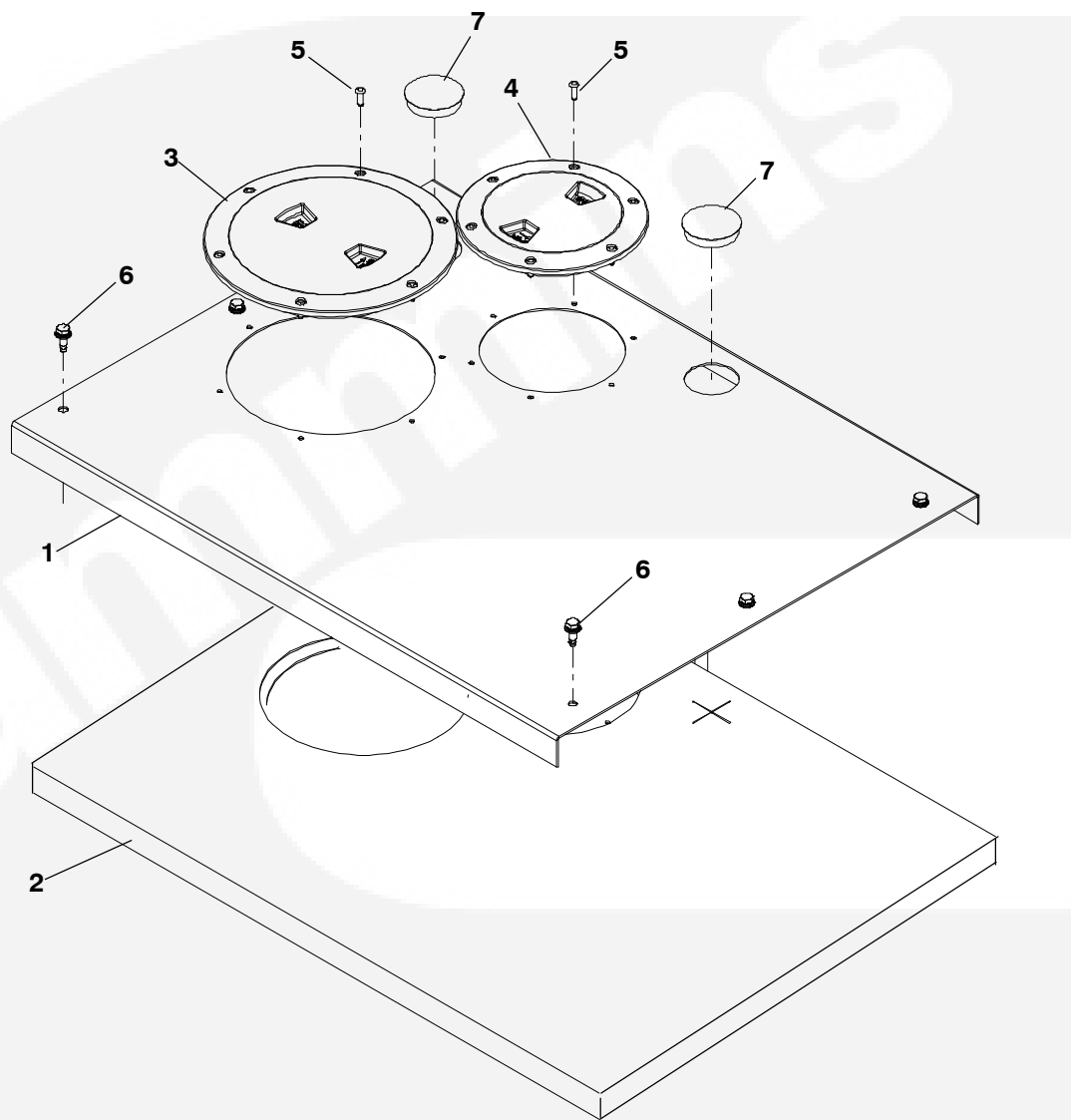


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	405-6958	1	Kit, Front Panel (Includes Parts Marked *)	10	405-6521-03	1	>Panel, Roof Extension
	405-6960	1	Kit, Panel Duct (Includes Insulation and Panel)	11			Screw, Hex Sems Stainless (M6 x 1 x 16mm)
	405-6961-01	1	Kit, Roof Extension Panel (Included Catch & Rivets +)		821-6006-01	17	MDKBL
	405-6961-02	1	Kit, Roof Extension Panel (Included Catch & Rivets >)		821-6006-01	24	MDKBM, MDKBN
1	818-0231-01	8	>+*Rivet, Pop	12	405-4445-03	1	>+Panel, Roof End Insulation
2	406-1032	4	>+*Catch, Door	13	405-6523-03	1	+Panel, Roof End
3			*Panel, Front	14	405-6811	3	>Insulation, Panel Roof Extension (MDKBM, MDKBN)
	405-6513-03	1	Spec A-B	15	800-6033	1	Screw, Hex Head Cap (M6 x 1x 16mm) (Spec A)
	405-8825-03	1	Spec C	16	853-2006	1	Washer, ET (M6) (Spec A)
4	517-0138-07	1	*Plug, Hole	17	850-2056	3	Washer, Lock (M6)(Spec A)
5	517-0138-04	1	*Plug, Hole	18			Nut, Hex (M6)
6	517-0138-09	1	*Plug, Hole (Spec A)		860-2057	3	Spec A-B
7	508-0021	1	*Grommet, Rubber		185-6699-02	3	Spec C
8			Insulation, Duct				
	405-6700	1	Spec A-B				
	405-9616	1	Spec C				
9			Panel, Duct				
	405-6515-03	1	Spec A-B				
	405-9615-03	1	Spec C				

* - Parts Included in Front Panel Kit.

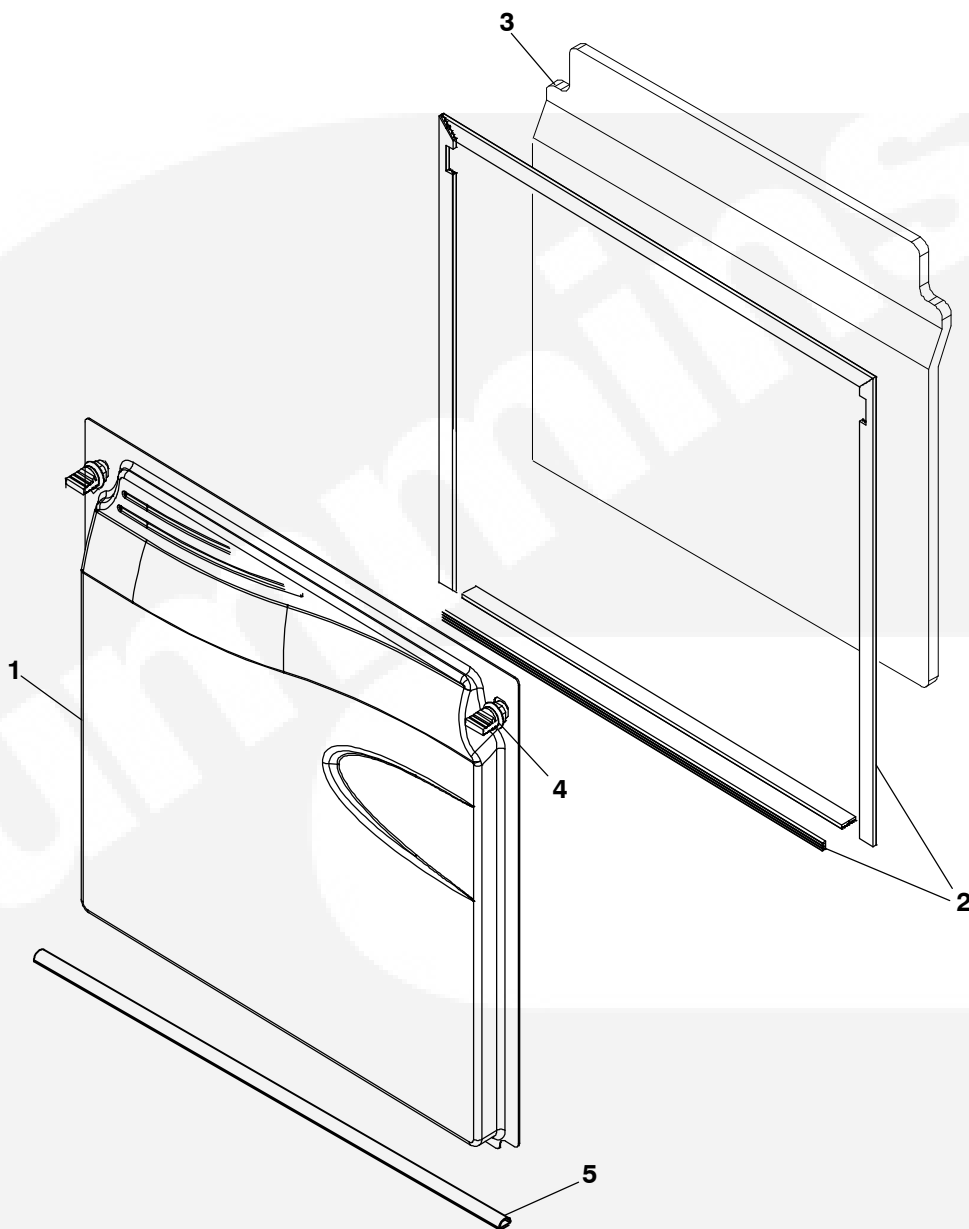
+> - Parts Included in Roof Extension Panel Kit.

Engine Sound Shield (Begin Spec D)



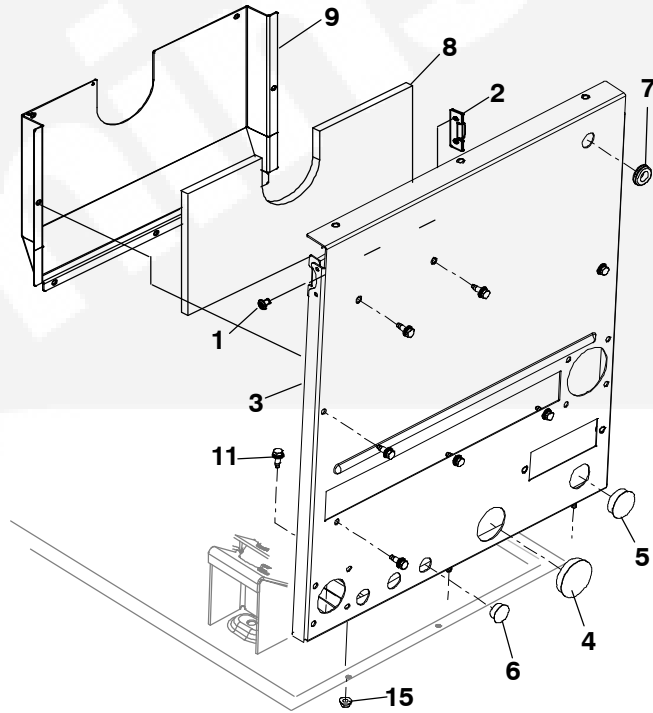
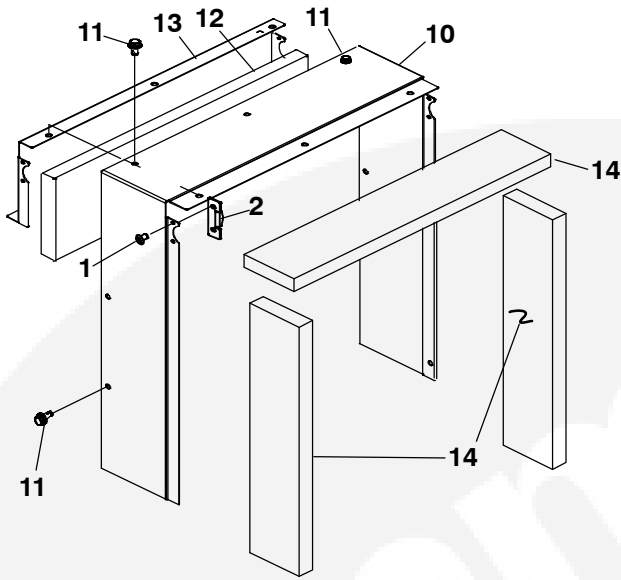
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	404-0016-03	1	Panel, Roof	6			Screw, Hex Head Sems
2	405-6688	1	Insulation, Roof		800-6395-01	6	Spec D-E
3	405-6340	1	Cover, Access		A030B088	6	Begin Spec F
4	405-6709	1	Cover, Access	7	517-0392-19	2	Plug, Hole
5			Rivet, Pop				
	818-0239-03	12	Spec D-E				
	A030F177	12	Begin Spec F				

Engine Panel Sound Shield (Spec D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-9751-03	1	Door, Sound Shield		406-0958		(Knob)
2	895-0395	1	Seal, Weather (27.5')		A030B824		(Slotted)
3	405-9568	1	Insulation, Door	5	895-0411	1	Weather, Seal (4.1')
4		2	Latch, Door (1/4 Turn)				

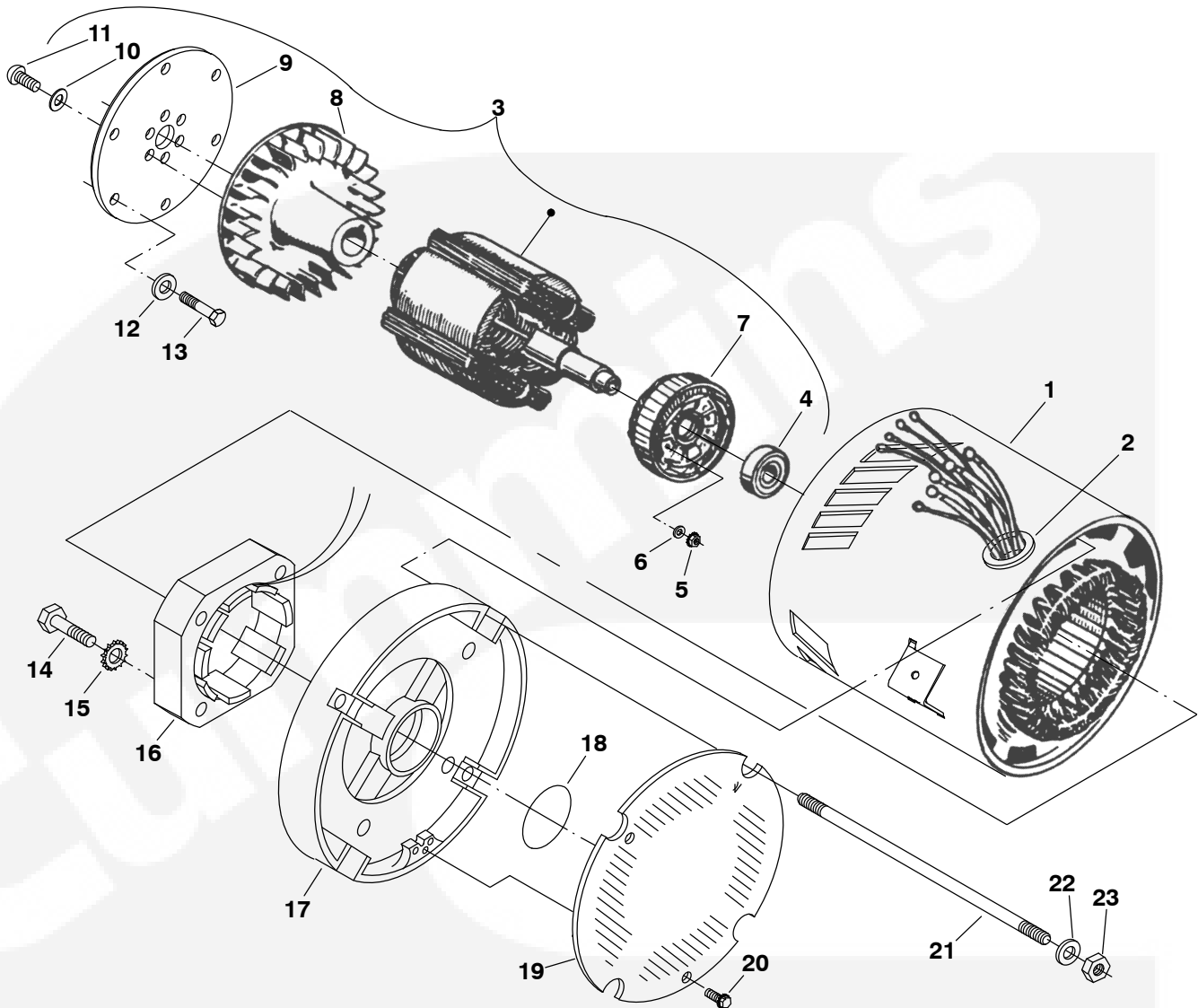
Engine Panel Sound Shield (Begin Spec D)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	818-0231-01	8	Rivet, Pop Spec D-E
	A030F179	8	Begin Spec F
2	406-1032	4	Catch, Door
3	404-0012-03		Panel, Front
4	517-0138-07	1	Plug, Hole
5	517-0138-04	1	Plug, Hole
6	517-0136	1	Plug, Hole
7	508-0021	1	Grommet, Rubber
8	405-9616	1	Insulation, Duct
9	404-0017-03	1	Panel, Duct
10	404-0015-03	1	Panel, Roof Extension (MDKBM and MDKBN)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
11			Screw, Hex Sems Stainless (M6 x 1 x 16mm)
	800-6395-01	19	MDKBL Spec D-E
	800-6395-01	26	MDKBM, MDKBN Spec D-E
	A030B088	19	MDKBL Begin Spec F
	A030B088	26	MDKBM, MDKBN Begin Spec F
12	405-4445-03	1	Panel, Roof End Insulation
13	404-0014-03	1	Panel, Roof End
14	405-6811	3	Insulation, Panel Roof Extension (MDKBM, MDKBN)
15	185-6699-02	3	Nut, Hex (M6)

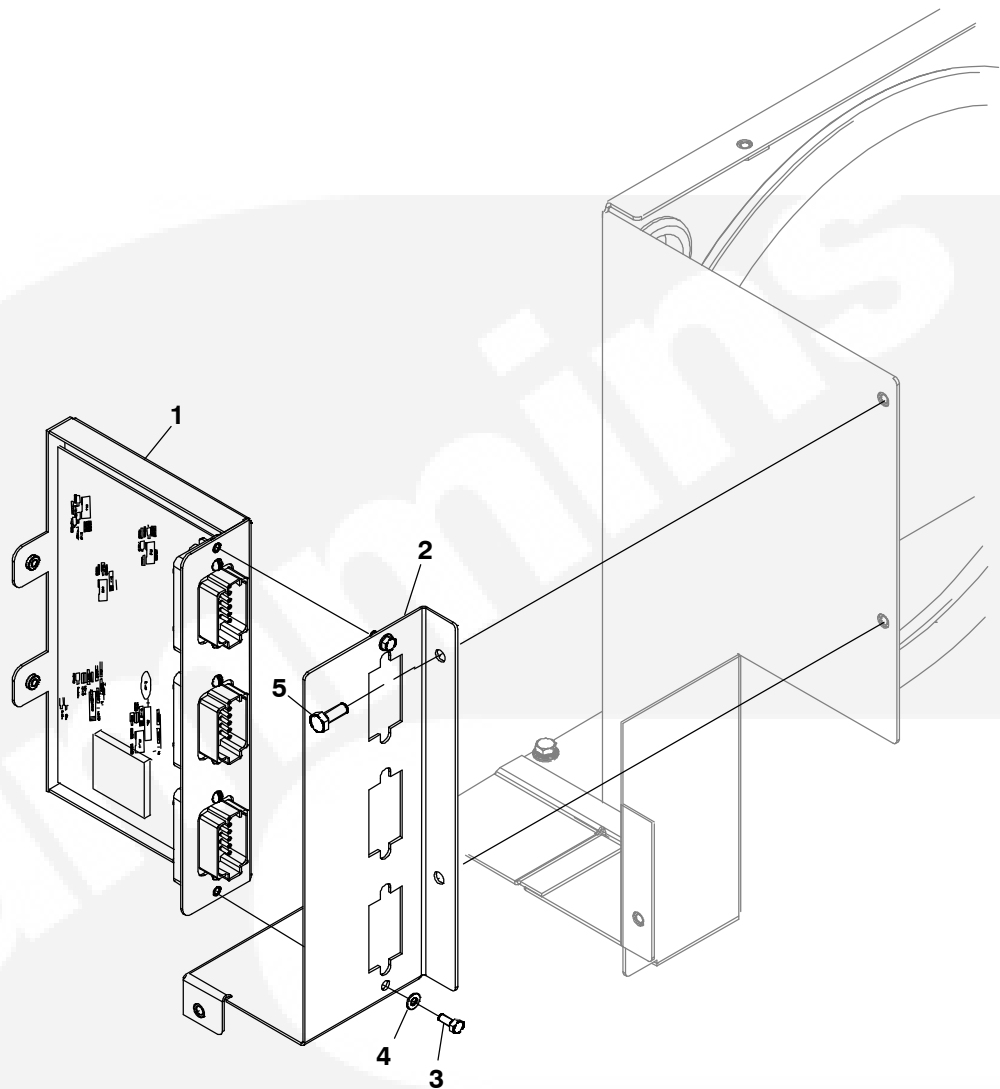
Generator



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Stator, Generator (Includes Grommet)	12	526-0399-41	6	Washer, Flat (.312)
	220-4600-01	1	MDKBL	13	800-2054	6	Screw, Hex Head Cap (M8 x 1.25 x 14mm)
	220-4600-03	1	MDKBM, MDKBN	14	815-0843	4	Screw, Hex Head Thread Form (1/4")
2	508-0183	1	Grommet	15	853-0013	4	Washer, Lock ET (1/4")
3			Rotor Assy, Generator (Includes Parts Marked *)	16	220-4413-02	1	Stator, Exciter
	201-3565-01	1	MDKBL	17	211-0465-02	1	Endbell
	201-3565-03	1	MDKBM, MDKBN	18	509-0094	1	Seal, O'Ring
4	510-0112	1	*Bearing, Ball	19	234-1068-03	1	Cover, Endbell
5	870-0131-01	2	*Nut, ET Hex (#10-32)	20	815-0181	3	Screw, ET Hex Head Thread Cutting (#10-32 x 1/2")
6	526-0399-11	2	*Washer, Flat (#10)	21			Stud
7	201-3515-02	1	*Rotor, Exciter		520-1002-06	4	MDKBL
	358-0069	1	Diode		520-1004-02	4	MDKBM, MDKBN
	358-0070	1	Rectifier	22	526-0399-42	4	Washer, Flat (.375")
8	205-0255	1	*Fan, Generator	23	862-0026-07	4	Nut, Hex (3/8-16")
9	232-2826	1	*Disk, Rotor Drive				
10	526-0399-42	6	*Washer, Flat (3/8")				
11	815-0917-04	6	*Screw, Button Head Torx (3/8-16 x 1")				

* - Parts Included in Rotor Assy.

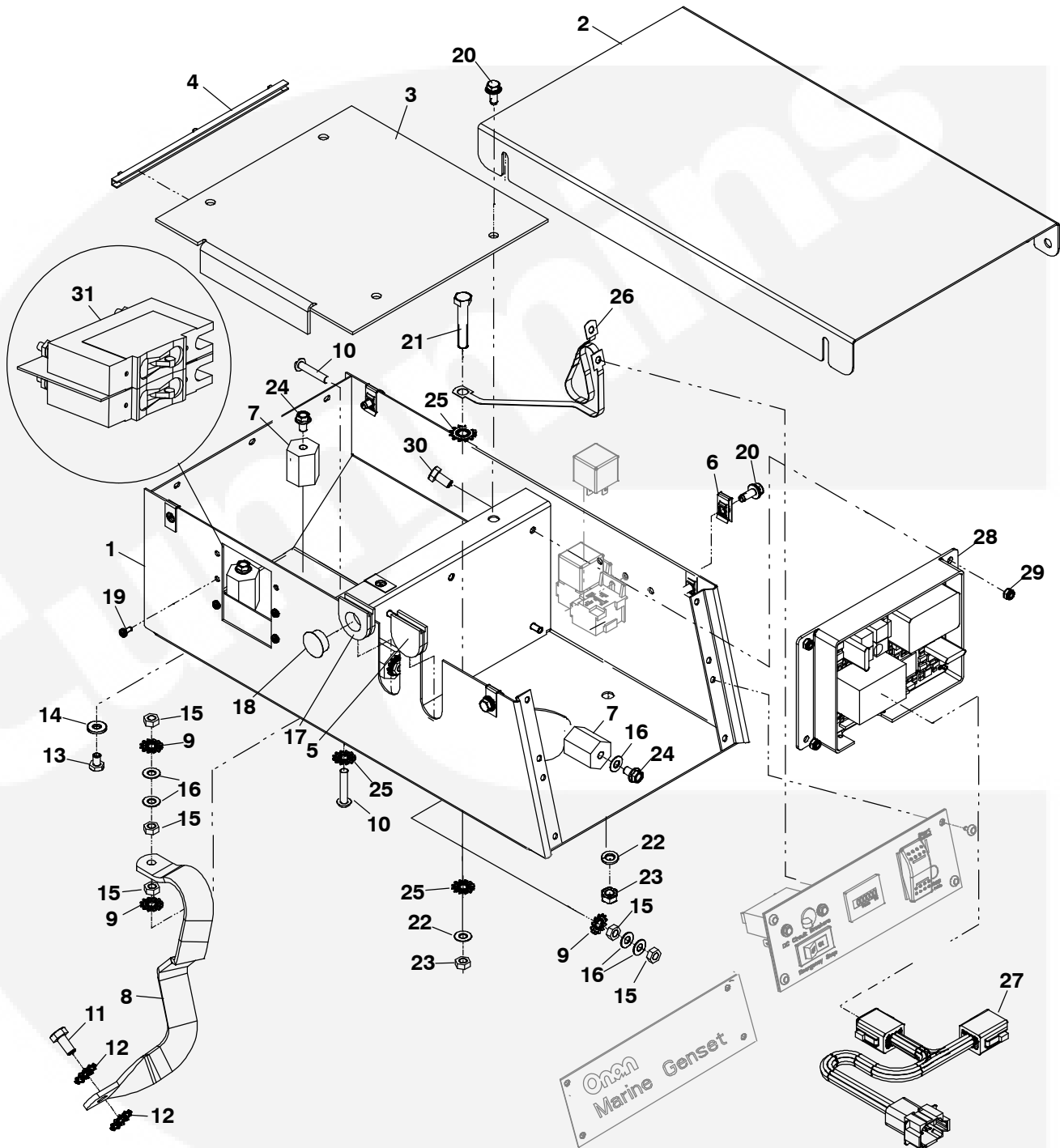
PCB Mounting



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	300-6396	1	PCB, Control
2	404-0022-03	1	Panel, UMC Mounting
3	800-3042	2	Screw, Hex (M4 x 10)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
4	526-2050	2	Washer, Flat (M4)
5	800-6033	3	Screw, Hex Head Sems Stainless (M6 x 1 x 16mm)

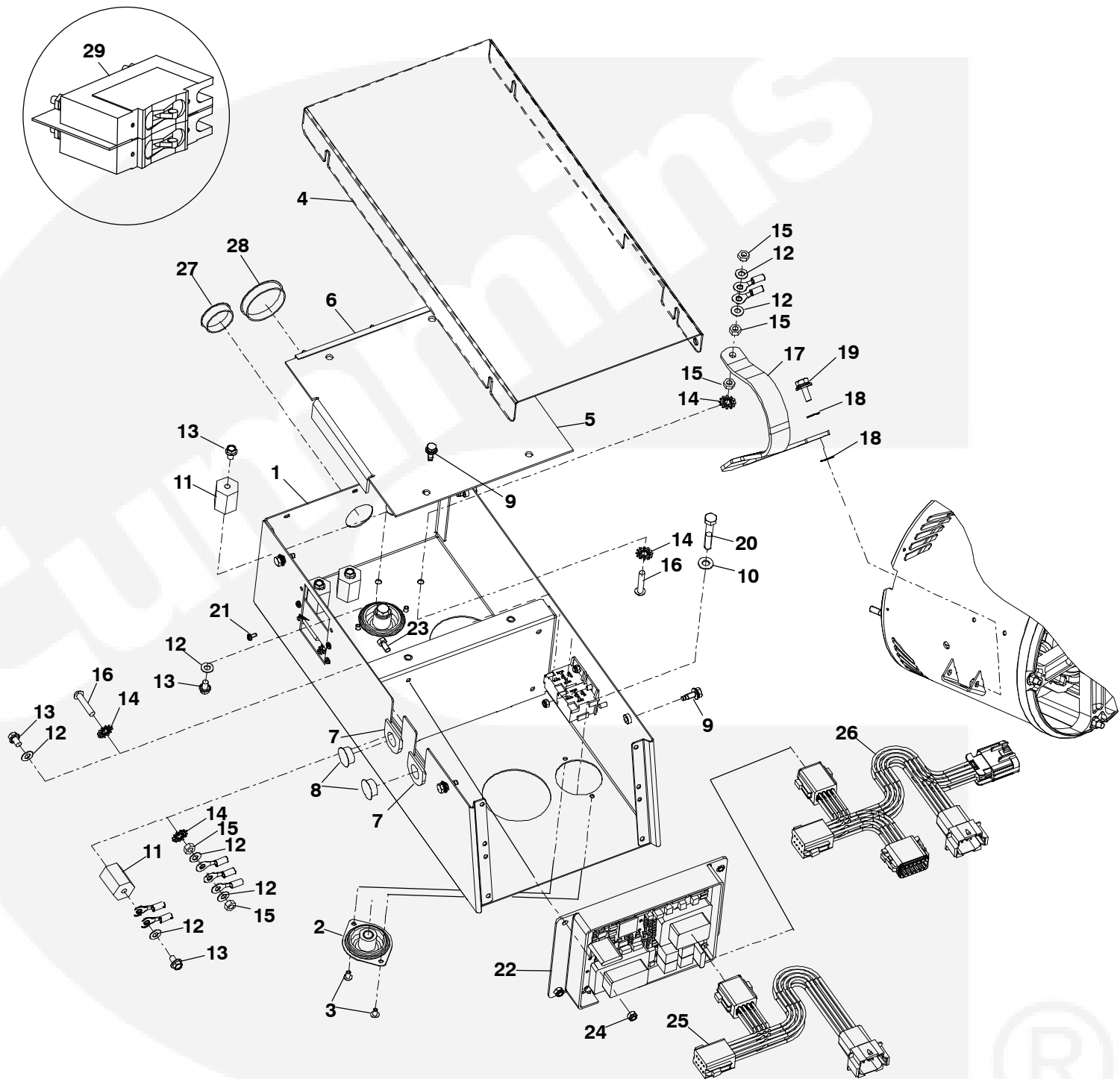
Control Box (Spec A-C)



Control Box (Spec A-C)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	319-5503-03	1	Control, Box	20	821-6006-01	6	Screw, Hex Head Sems Stainless (M6 x 1 x 16mm)
2	319-4370-03	1	Cover, Control	21	800-6062	3	Screw, Hex Head Cap (M8 x 1.25 x 45mm)
3	319-4404	1	Cover, Control	22	850-2058	3	Washer, Split Lock Stainless (M8)
4	332-3750	1	Guide, Card	23	860-2058	3	Nut, Hex Stainless (M8 x 1.25mm)
5	508-1105-01	1	Grommet, Remote	24			Screw, Hex Flange (1/4-20 x 3/8")
6	870-2228	6	Clip, Nut		821-0009	2	Neg Gnd Single Phase
7			Standoff, Insulator		821-0009	3	Neg Gnd Three Phase
	332-2370	2	Neg Gnd Single Phase		821-0009	3	ISO Gnd Single Phase
	332-2370	3	Neg Gnd Three Phase		821-0009	4	ISO Gnd Three Phase
	332-2370	3	ISO Gnd Single Phase	25	856-0008	2	Washer, EIT(5/16")
	332-2370	4	ISO Gnd Three Phase	26	337-3508	1	Strap, Bond
8	337-2795	1	Strap, Bond	27	338-4491	1	Harness, Accessory (NIM)
9			Washer, Lock (1/4")	28			PCB (NIM)
	856-0006	4	Neg Gnd		327-1444-01	1	J1939
	856-0006	3	ISO Gnd		327-1444-02	1	* SmartCraft
10			Screw, Brass (1/4-20 x 1.25")	29	870-2062	4	Nut, Nylon Lock (M5)
	810-0155	2	Neg Gnd	30	800-6002	4	Screw, Hex Head Sems (M5 x .8 x 10mm)
	810-0155	1	ISO Gnd	31			Breaker, Circuit
11	800-3017-18	1	Screw, Hex Head Cap (M8 x 1.25 x 16mm)				MDKBL
12	853-0016	2	Washer, Lock		320-1689-04	1	30Amps
13			Screw, Hex Head Cap (1/4-20 x .375")		320-1689-05	1	35Amps
	800-0310-01	2	Single Phase		320-1689-12	1	55Amps
	800-0310-01	3	Three Phase				MDKBM
14			Washer, Flat (1/4-20)		320-1689-06	1	40Amps
	526-0399-13	2	Single Phase		320-1689-07	1	45Amps
	526-0399-13	3	Three Phase				MDKBN
15			Nut, Hex Brass (1/4-20)		320-1689-08	1	50Amps
	871-0016	5	Neg Gnd		320-1689-09	1	55Amps
	871-0016	3	ISO Gnd		320-1689-12	1	70Amps
16			Washer, Flat Brass (1/4")				
	526-0052	4	Neg Gnd				
	526-0052	3	ISO Gnd				
17	508-1105	1	Grommet, Remote				
18	517-0136	1	Plug, Hole				
19			Screw, Pan Head XREC (6-32 x .31)				
	815-0550-01	4	Single Phase				
	815-0550-01	6	Three Phase				

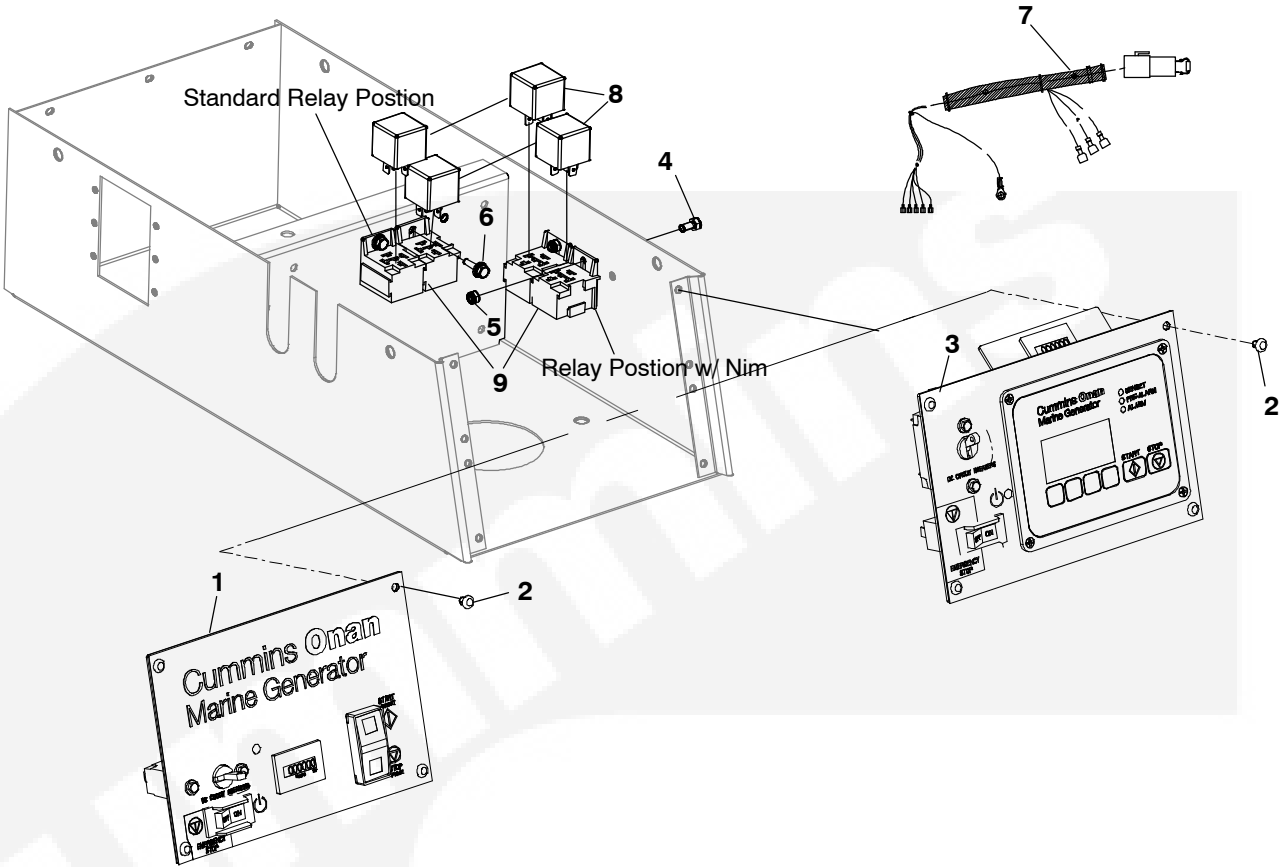
Control Box (Begin Spec D)



Control Box (Begin Spec D)

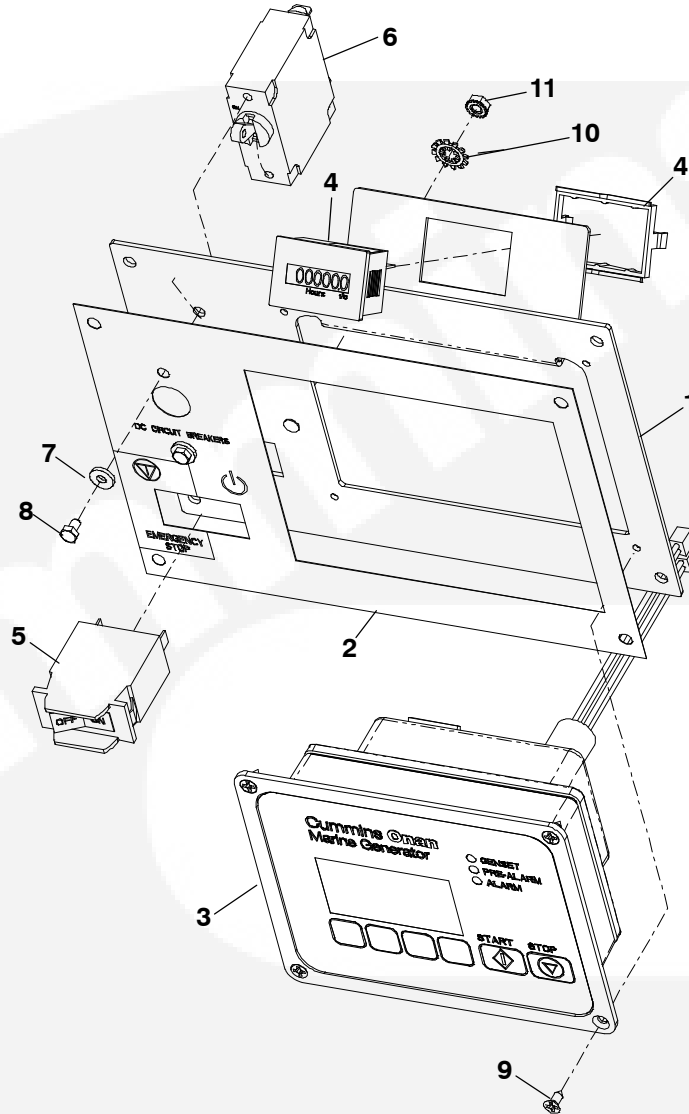
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	319-6227-03	1	Control, Box	20	800-6062	3	Screw, Hex Head Cap (M8 x 1.25 x 45mm)
2	402-0681-01	3	Isolator, Vibration	21			Screw, XREC Phillips (#6-23 x .312")
3	818-0231-01	6	Rivet, Pop		815-0550-03	4	Neg GND 1 Phase 12 & 24V
4	319-6228-03	1	Cover, Box Control				ISO GND 1 Phase 12 & 24V
5	319-4404	1	Cover		815-0550-03	6	Neg GND 3 Phase 12 & 24V
6	332-3750	1	Guide, Card				ISO GND 3 Phase 12 & 24V
7	508-1105	2	Grommet, Remote	22			PCB
8	517-0136	2	Plug, Hole		327-1659-01	1	NIM/J1939
9	800-6395-01	6	Screw, Hex Head Sems (M6 1.0 x 16mm)		327-1659-02	1	NIM/SmartCraft
10	526-2100	3	Washer, Flat (M8)		327-1686-03	1	NIM/SmartCraft 2
11			Standoff, Insulator	23	800-6002	4	Screw, Hex Head (M5 x 0.8 x 10mm)
	332-2370	2	Neg GND 1 Phase 12 & 24V	24	870-2062	2	Nut, Nylon Locking (M5)
	332-2370	3	Neg GND 3 Phase 12 & 24V	25	338-4491	1	Harness, Accessory (J1939 / SmartCraft)
			ISO GND 1 Phase 12 & 24V				Harness, Accessory (SmartCraft 2)
	332-2370	4	ISO GND 3 Phase 12 & 24V	26	338-4982	1	Plug, Hole
12			Washer, Flat (6.75ID x 14.30D x .8mm)	27	517-0138-05	1	Plug, Hole
	526-0052	6	Neg GND 1 Phase 12 & 24V	28	517-0138-08	1	Breaker, Circuit
	526-0052	7	Neg GND 3 Phase 12 & 24V	29			MDKBL
	526-0052	8	ISO GND 1 Phase 12 & 24V		320-1689-04	1	30Amps
	526-0052	9	ISO GND 3 Phase 12 & 24V		320-1689-05	1	35Amps
13			Screw, Locking Head (1/4-20UNC x 14.30D x .8)		320-1689-12	1	55Amps
	821-0009	4	Neg GND 1 Phase 12 & 24V				MDKBM
	821-0009	6	Neg GND 3 Phase 12 & 24V		320-1689-06	1	40Amps
			ISO GND 1 Phase 12 & 24V		320-1689-07	1	45Amps
	821-0009	8	ISO GND 3 Phase 12 & 24V				MDKBN
14	856-0006	4	Washer, ETIT Locking (1/4")		320-1689-08	1	50Amps
15	871-0016	5	Nut, Hex (1/4-20")		320-1689-09	1	55Amps
16	810-0155	2	Screw, Round Head (1/4-20UNC x 1.25")		320-1689-12	1	70Amps
17	337-2795	1	Strap, Bond				
18	853-0016	2	Washer, ET Locking (5/16")				
19	821-6003-01	1	Screw, Hex Head Sems (M8 x 1.25 x 16mm)				

Control Panel Components



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Assy, Engine Panel (Spec D See Control Panel for Parts)	6	821-6001-03	2	Screw, Hex Head Sems (M5 x .8 x 16mm) (Non NIM)
	300-6362-01	1	12V	7			Harness, Control
	300-6362-02	1	24V		338-4213	1	N/A
2	818-1150-03	4	Rivet, Drive Plastic (Std)		338-4414	1	Non Nim
3	300-6363-02	1	Assy, Control (Spec D)		338-4414	1	Nim
4	800-6002	2	Screw, Hex Head Cap (M5 x .8 x 10mm) (NIM)	8			Relays
					307-2767	2	12V
5	870-2062	2	Nut, Nylon Lock (M5) (NIM)		307-2819	2	24V
				9	323-1563	2	Contact, Relay

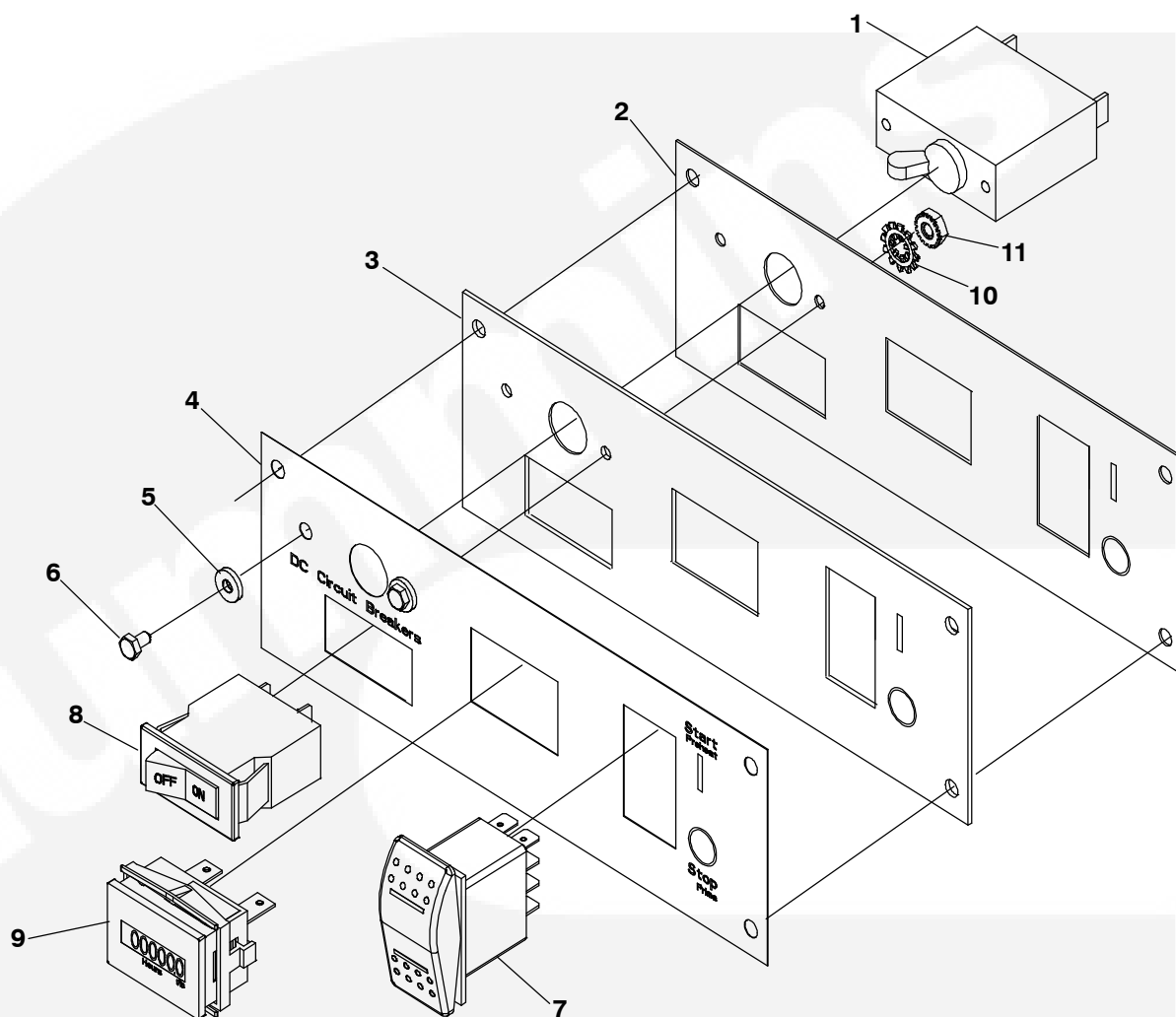
Control Panel Components (eSDD Display)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-5944-03	1	Kit, Control (Kit Includes Parts Marked *)	7	526-0399-05	2	*Washer, Flat (#6)
1	319-5544-02	1	*Panel, Display	8	800-0309-10	2	*Screw, Hex Head Mach (#6-32UNC-2A x .250")
2	98-8323	1	*Label, Information	9	814-2155-01	4	*Screw, Flange Head XREC (M3.5 x 9.5mm)
3			*Controls	10	856-0003	1	*Washer, ETIT Lock (#10")
	300-5885	1	Spec A-C	11	870-0131	1	*Nut, Sems ET (#10-32")
	300-6393	1	Begin Spec D				
4	302-2048	1	Hourmeter				
5			Breaker, Circuit				
	320-1140	1	Spec A-C				
	320-2361	1	Begin Spec D				
6			Breaker, Circuit				
	320-1862-01	1	Spec A-C				
	320-2362	1	Begin Spec D				

* - All Parts Included in Control Kit and Instruction Sheet.

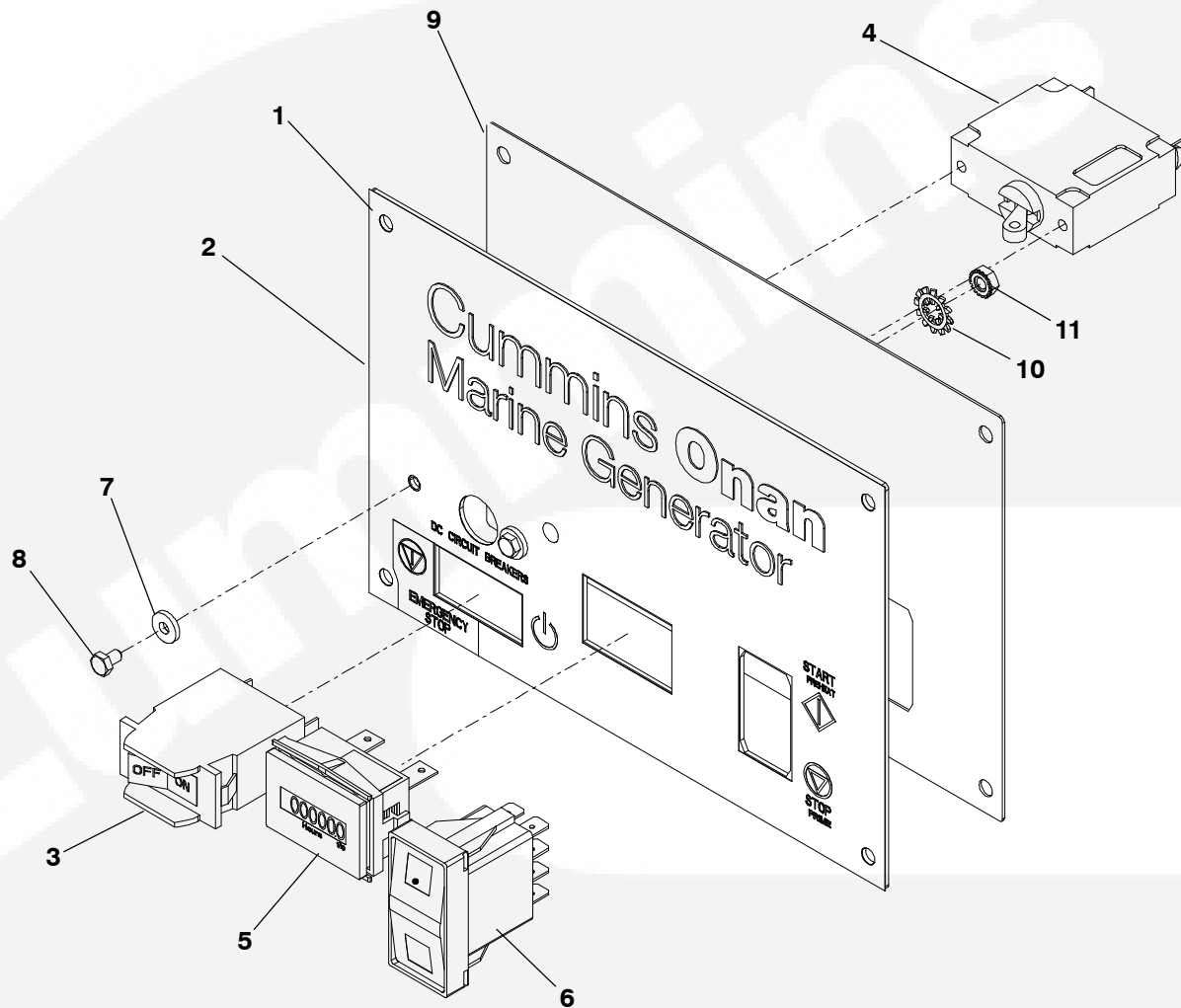
Control Panel Components (Breaker Switch Option Spec A-C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			Assy, Engine Panel (All Parts Included)	7			Switch, Rocker SPDT
	300-5476-05	1	12V	308-1102	1		24VDC
	300-5476-06	1	24V	308-1101	1		12VDC
1	320-1862-01	1	Breaker, Circuit (50 Amp)	8	320-1140	1	Breaker, Circuit (15 Amp)
2	319-4467-02	1	Panel, Control (Ground)	9	302-2048	1	Meter, Hour
3	319-4368-06	1	Panel, Control	10	856-0003	1	Washer, EIT Lock (#10)
4	98-7781	1	Label, Control	11	870-0131	1	Nut, Sems EIT
5	526-0399-05	2	Washer, Flat (#6)				
6	800-0309-10	2	Screw, Hex Head (6-32 x 1/4")				

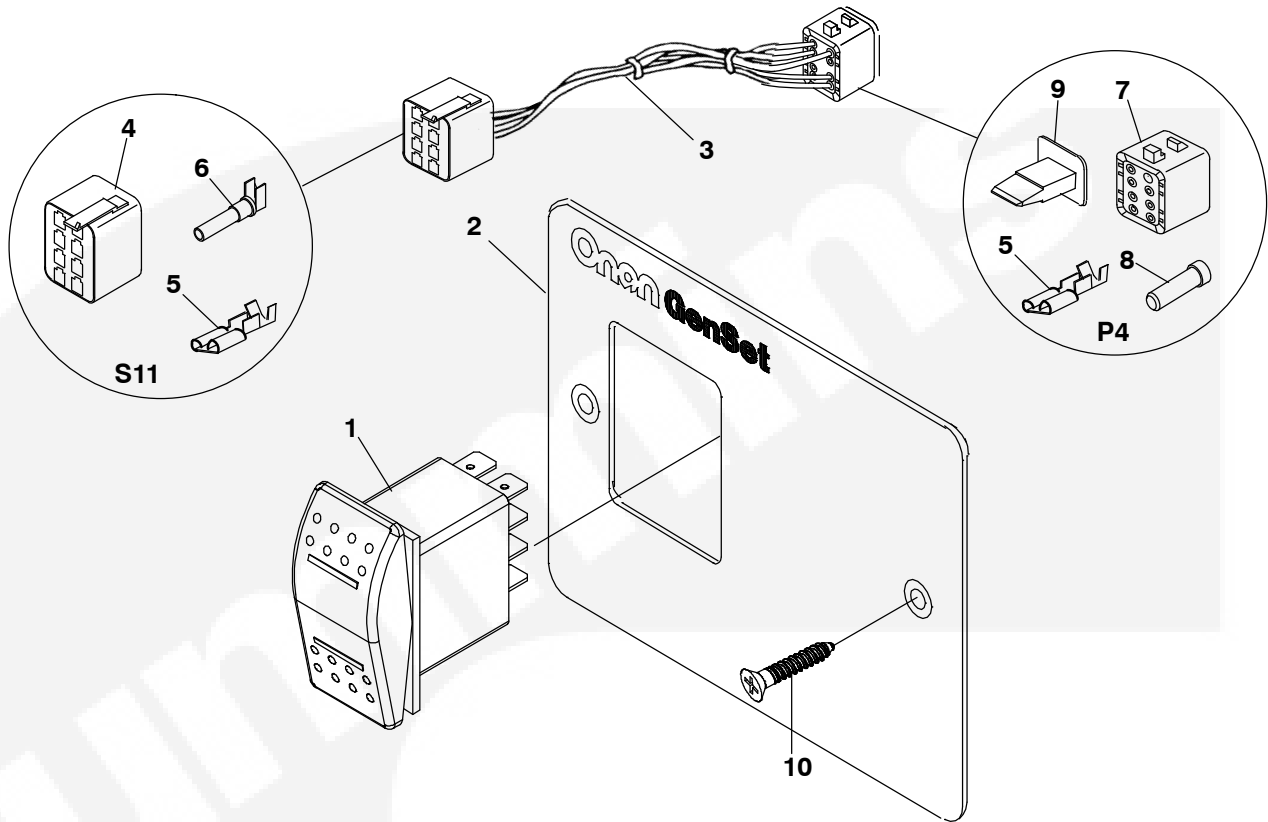
* - See Control Box for Location.

Control Panel Components (Breaker Switch Option Begin Spec D)



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

Remote Control Panel

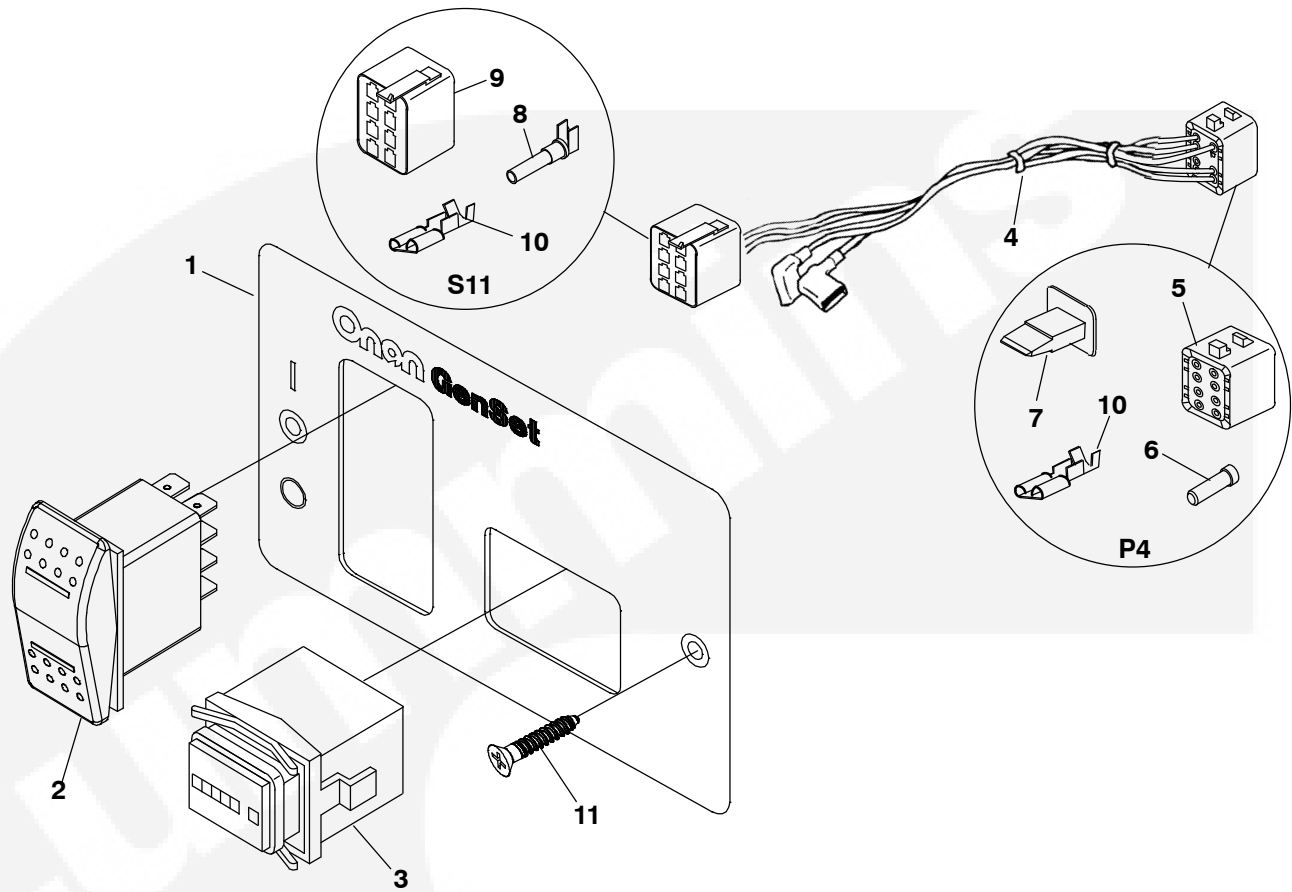


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			Kit, Remote Switch Harness (Includes Parts Marked +)	6	323-1492	6	*Terminal, Socket
	541-0941-01	1	12V	7	323-1541	1	*Plug, (8 Pin)
	541-0941-02	1	24V	8	323-1491	3	*Plug, Seal
			Kit, Panel Remote (Includes Parts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

- Parts Included in Remote Panel.

+ - Parts Included in Remote Switch Harness. Instructions included in Kits only

Remote Control Panel w / Hour Meter

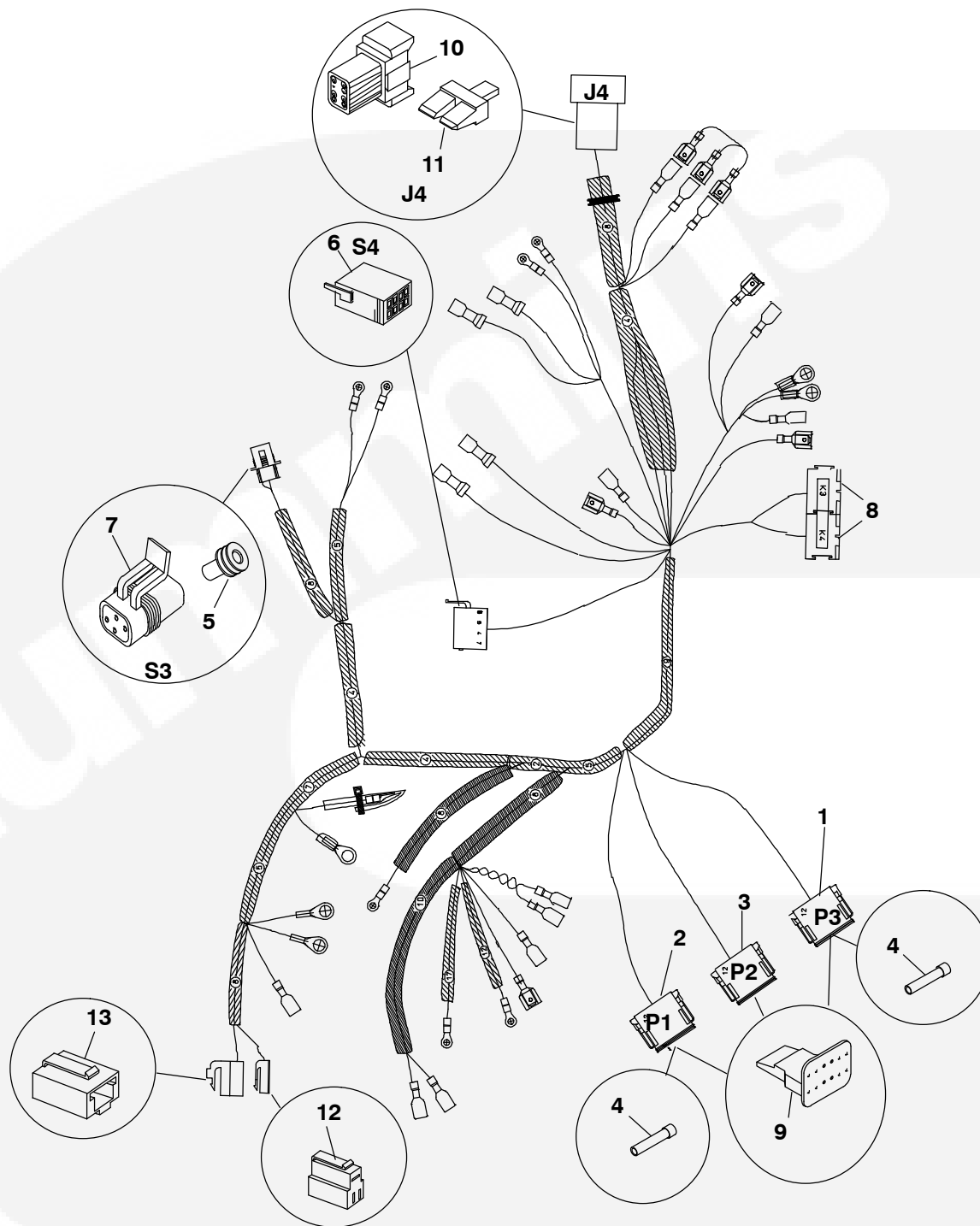


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
			Kit, Remote Panel
	300-5727-01	1	12V
	300-5727-02	1	24V
1	319-6992	1	Panel, Remote Printed
2			Switch, Rocker (S11)
	308-1101	1	12V
	308-1102	1	24V
3	302-2002	1	Meter, Hour (M11)
4	338-3990	1	Harness, Remote Panel
			(Includes Parts Marked *)
5	323-1541	1	*Plug (8 Pin) (P4)

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
6	323-1591	2	*Plug, Seal
7	323-1543	1	*Wedge, Plug (8 Pin)
8	323-1492	6	*Pin, Contact
9	308-1019	1	*Connector, Switch (S11)
10	332-2890	6	*Terminal, Receptacle (.25")
11	815-0910	2	Screw, Wood (#6 x 1)
12	98-8081	1	Label, Panel (Remote)

* - Parts Included in Remote Panel Wiring Harness.

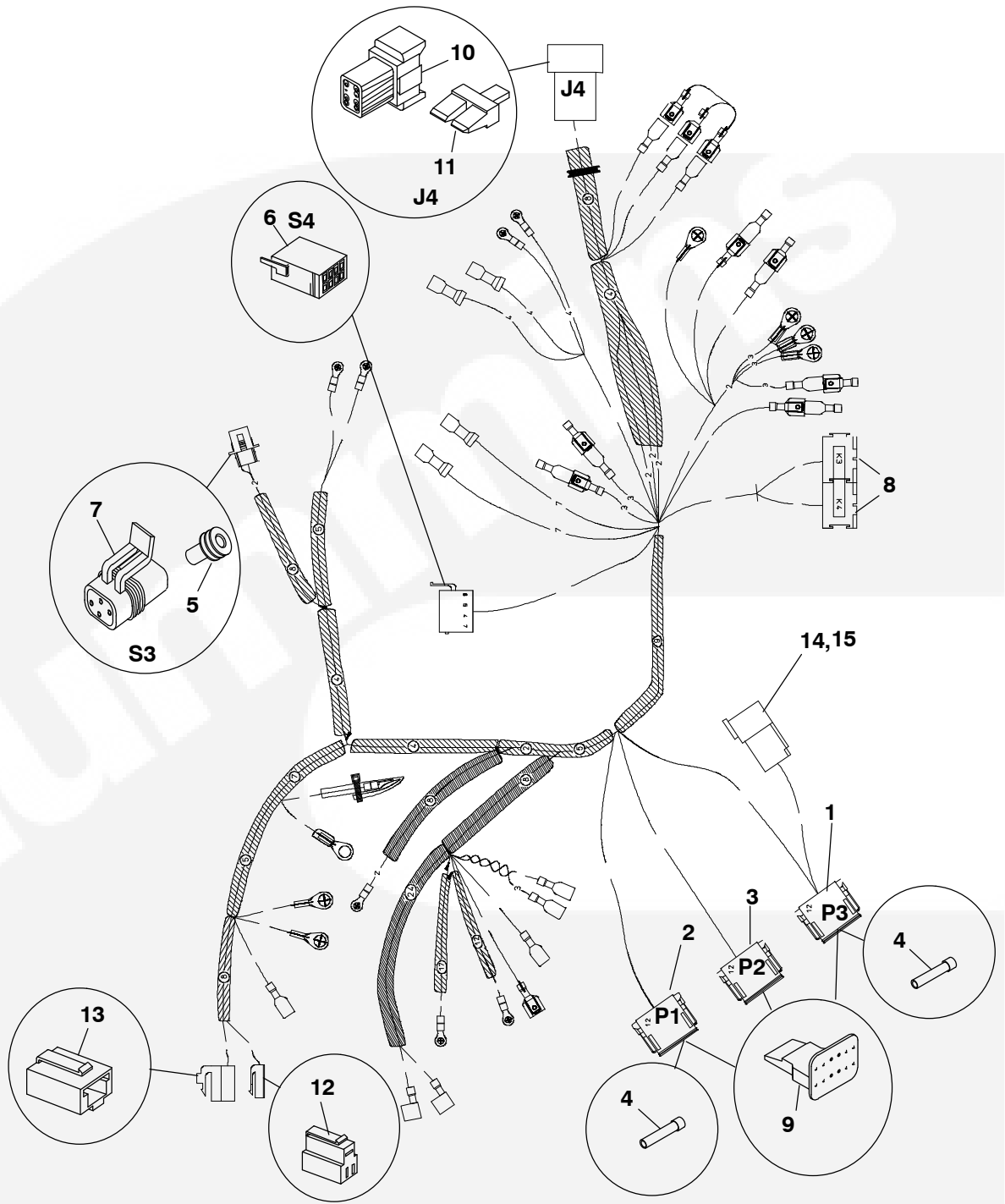
Control Harness (Spec A-C)



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	338-4396	1	Harness, Control
1	323-1582-06	1	Plug (12 Pin, Green P3)
2	323-1582-05	1	Plug (12 Pin, Black P1)
3	323-1582-07	1	Plug (12 Pin, Gray P2)
4	323-1591	AR	Plug (P1, P3)
5	323-1708	AR	Seal,Cable (S3)
6	308-1019	1	Switch, Connector (S4)

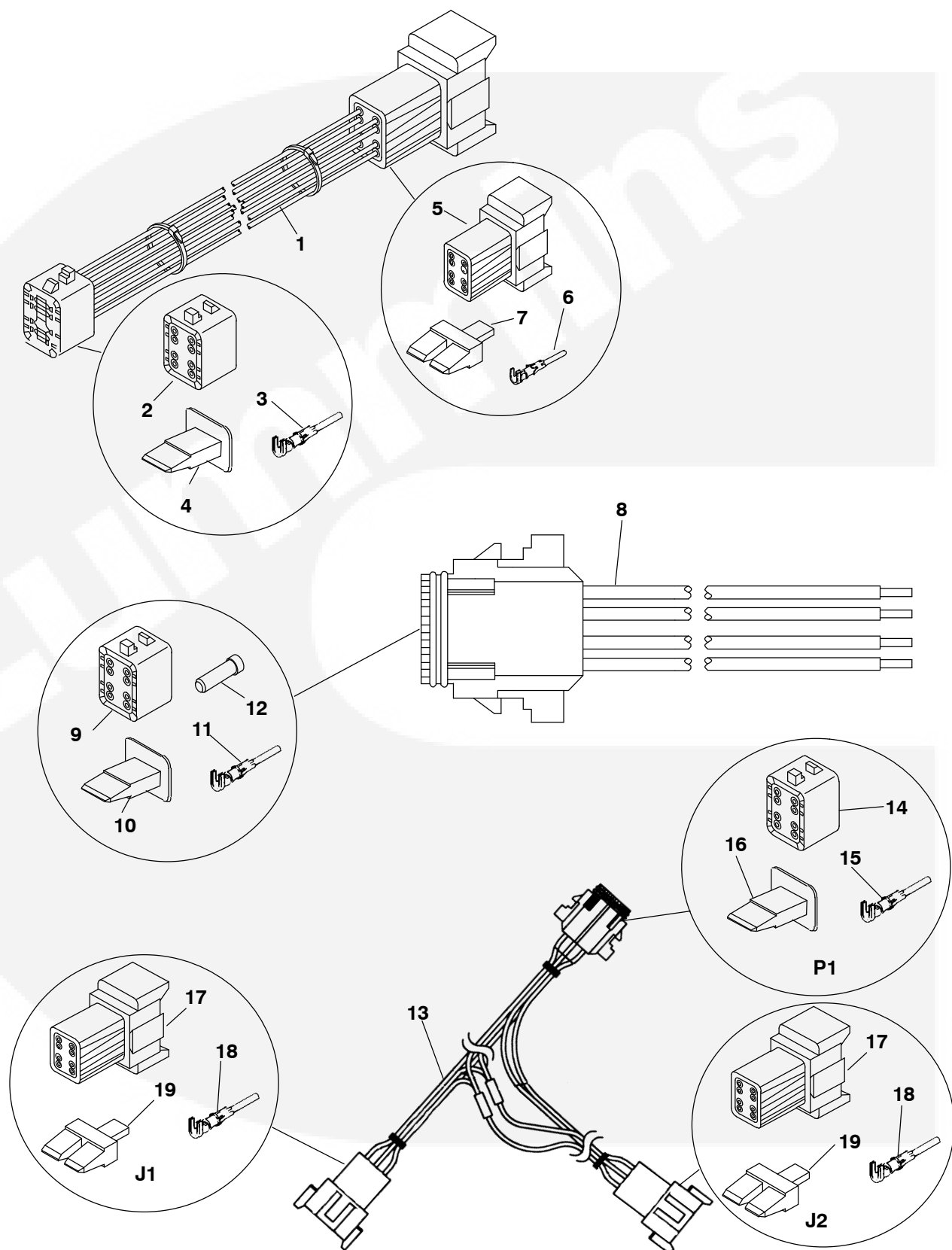
REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
7	323-1765	1	Connector, Housing 4 Pin (S3)
8	323-1563	1	Socket, Relay
9	323-1583	3	Plug, Wedge 12 Pin
10	323-1542	1	Connector, Receptacle 8 Pin
11	323-1544	1	Receptacle, Wedge (J4)
12	323-1791	1	Connector, Plus 1 Pos
13	323-1792	1	Connector, Plus 3 Pos

Control Harness (Begin Spec D)

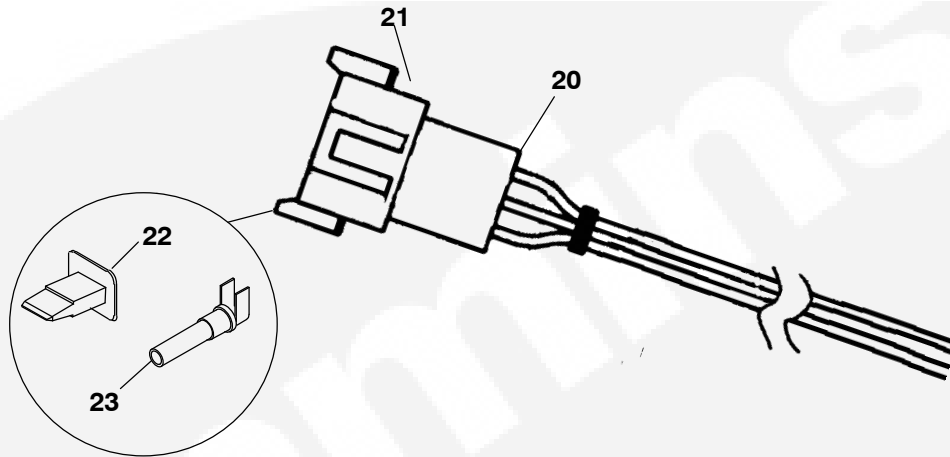


REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	338-4953	1	Harness, Control	9	323-1583	3	Plug, Wedge 12 Pin
1	323-1582-06	1	Plug (12 Pin, Green P3)	10	323-1542	1	Connector, Receptacle 8 Pin
2	323-1582-05	1	Plug (12 Pin, Black P1)	11	323-1544	1	Receptacle, Wedge (J4)
3	323-1582-07	1	Plug (12 Pin, Gray P2)	12	323-1791	1	Connector, Plus 1 Pos
4	323-1591	AR	Plug (P1, P3)	13	323-1792	1	Connector, Plus 3 Pos
5	323-1708	AR	Seal,Cable(S3)	14	323-1625	1	Connector, Connector
6	308-1019	1	Switch, Connector (S4)				Receptacle 6 Pin
7	323-1765	1	Connector, Housing 4 Pin (S3)	15	323-1626	1	Wedge, 6 Pin
8	323-1563	1	Socket, Relay				

Wiring Harnesses



Wiring Harnesses



REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			Harness, Remote Extension (Includes Parts Marked #)	14	323-1541	1	±° Plug, Connector (8 Pin)
	338-3167	1	15 feet	15	323-1492	AR	±° Terminal, Socket
	338-3168	1	25 feet	16	323-1543	1	±° Wedge, Plug (8 Pin)
	338-3169	1	45 feet	17	323-1542	2	+ Connector, Receptacle (8 Pin)
	338-3169-01	1	75 feet	18	323-1491	AR	@ Terminal, Pin
	338-3169-02	1	100 feet	19	323-1544	2	+ Wedge, Lock, Receptacle (8 Pin)
	338-3169-03	1	150 feet				
2	323-1541	1	# Plug (8 Pin)	20	338-4017	1	Harness, Pigtail (Includes Parts Marked @)
3	323-1492	8	# Terminal, Socket	21	323-1542	1	@ Connector, Receptacle (8 Pin)
4	323-1543	1	# Wedge, Plug (8 Pin)	22	323-1544	2	@ Wedge, Lock (8 Pin)
5	323-1542	1	# Receptacle, (8 Pin)	23	323-1491	AR	@ Terminal, Pin
6	323-1491	8	# Terminal, Pin				
7	323-1544	1	# Wedge, Receptacle (8 Pin)				
8	338-4223	1	Harness, Remote Panel				
9	323-1541	1	Plug (8 Pin)				
10	323-1543	1	Wedge, Plug (8 Pin)				
11	323-1492	AR	Terminal, Socket				
12	323-1591	AR	Plug, Seal				
13	338-4016	1	Harness, Junction (Includes Parts Marked +)				

- Parts Included in Remote Extension Harness.

* - Parts Included in Custom Pigtail Harness.

° - Parts Included in Adapter Harness.

.+ - Parts Included in Junction Harness.

.@ - Parts Included in Pigtail Harness.

Labels / Kits

REF NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF NO.	PART NO.	QTY. USED	PART DESCRIPTION
	98-8601	1	Label, Information Sheet (Includes Labels Marked*)		98-8714	2	Label, Logo (Cummins Onan)
		4	*Label, Warning		98-8715	2	Label, (Cummins C)
		1	*Label, Information (No Step)		98-8717	1	Label, Logo (Cummins Onan C)
		1	*Label, Warning (Coolant)		98-8699	1	Label, Information (Rear)
		1	*Label, Information (Coolant)		98-8700	1	Label, Information (Front)
		1	*Label, Information (Oil Fill)				
		1	*Label, Information (Lifting)		100-3478-02	1	Kit, Cruise Includes All of The Following Items:
	98-8687	1	Label, Information Sheet (Includes Labels Marked+)		149-2106	2	Filter, Fuel
		1	+Label, Information		185-5835	2	Filter, Oil
		1	+Label, Information (Service)		132-0379	2	Kit Pump, Service
		3	+Label Warning		185-6934	2	Belt
		1	+Label Information (No Step)		130-4434	2	Pencil, Zinc
		1	+Label Danger		417-0233	1	Box, Cruise Kits
		1	+Label, Warning (Coolant)		98-8387	1	Label, Information (Reconnect)
		1	+Label, Information (Ground)				

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