

93900 to 93999

SERVICE ENGINE



SALES MANUAL

**MODEL 93900 SERIES ENGINES REPLACED WITH
 STANDARD SERVICE ENGINES**

In most cases, the Original Type numbers shown may be replaced by a Service Type Number without making any changes. Necessary changes of engine parts such as crankshafts, reduction parts, blower housings, etc., are noted. Other differences, such as mufflers, elbows, deflectors, etc., are not listed but are very important for safety and engine performance. Be sure the exhaust system on the replacement engine duplicates the system originally selected by the equipment manufacturer. Parts that are suitable for additional use should be transferred. Before making any conversion, check the data shown in the column labeled "REMOVE, ADD and NOTE." See if the changes, which are shown, are actually necessary on the application in question. Often a standard service engine will be a WORKABLE replacement without converting to such things as a special fuel tank or starter position.

If the crankshaft number does not appear in the "Original Engine" column, consult the Illustrated Parts List for the correct service replacement crankshaft number.

Engine Replacement Notes:

- NOTE 25:** If the replacement engine supersedes to or is a Model 120000 series engine, refer to the illustrations located after the conversion data for this model series. The overall dimensions that differ, are shown in the illustrations. If after making a visual inspection and it is determined the Model 120000 series engine cannot be used because of equipment interference, the original engine should be repaired with individual parts.
- NOTE 73:** Transfer Flywheel Assembly to the replacement engine.
- NOTE 88:** Transfer Muffler and/or Spark Arrester Assembly from the original engine if suitable for additional service or add new parts as required

Short Block Notes:

The SHORT BLOCK part number shown, is the assembly which can be used to rebuild the Original Type Number. If a letter appears after the short block number, it indicates the short block must be modified. The change denoted by each letter is as follows:

- NOTE FF:** Change Drive Shaft in Short Block. Remove 230948. Add 230831.
- NOTE PP:** Change Drive Shaft in Short Block. Remove 230831. Add 231213.

93900 to 93999

Original Engine			Make From		Remove		Add		Note	Change to Type	Trim	RPM	Short Block		
Type	Model	Crank	Model	Type #	Qty	Part #	Qty	Part #					Part #	Notes	
0115	93902	492748	9M902	0015							All	3300	398210		
0116	93902	492748	9M902	0015							All	3300	398210		
0117	93902	492748	122K02	0515	1	690319	1	691851	25		All	3500	398210		
0118	93902	492086	9M902	0016							All	3200	398211		
0119	93902	492086	9M902	0016							All	3200	398211		
0120	93982	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3200	398214	
0121	93902	492086	122K02	0516					25		All	3000	398211		
0122	93902	492086	9M902	0016							All	3200	398211		
0123	93902	492086	9M902	0016					73 88		All	4000	398211		
0124	93902	492086	9M902	0016							All	3100	398211		
0125	93902	492748	9M902	0015							All	3100	398210		
0126	93902	492086	9M902	0016							All	3200	398211		
0127	93902	492748	9M902	0015							All	3200	398210		
0128	93902	492748	9M902	0015							All	3500	398210		
0129	93902	494034	9M902	0018					73		All	3200	398213		
0130	93902	492086	9M902	0015							All	3500	398210		
0131	93902	492748	9M902	0015							All	3300	398210		
0132	93902	492748	9M902	0015							All	3500	398210		
0133	93902	492748	9M902	0015							All	3100	398210		
0134	93902	492086	9M902	0016							All	3200	398211		
0135	93902	492086	9M902	0016					73		All	3200	398211		
0136	93902	492748	122K02	0515	1	690319	1	691851	25		All	3500	398210		
0137	93902	492748	9M902	0015							All	3000	398210		
0138	93902	492086	9M902	0016					73		All	3500	398211		
0139	93902	492748	9M902	0015					73		All	3000	398210		

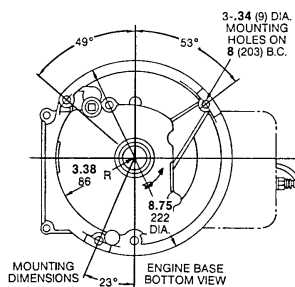
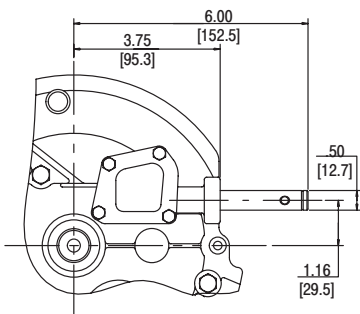
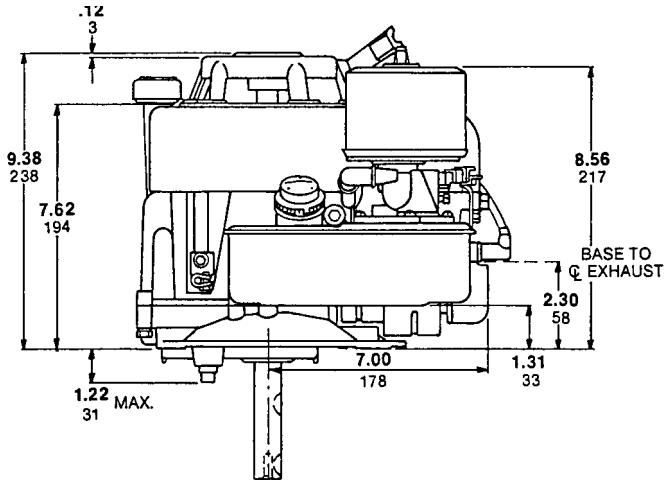
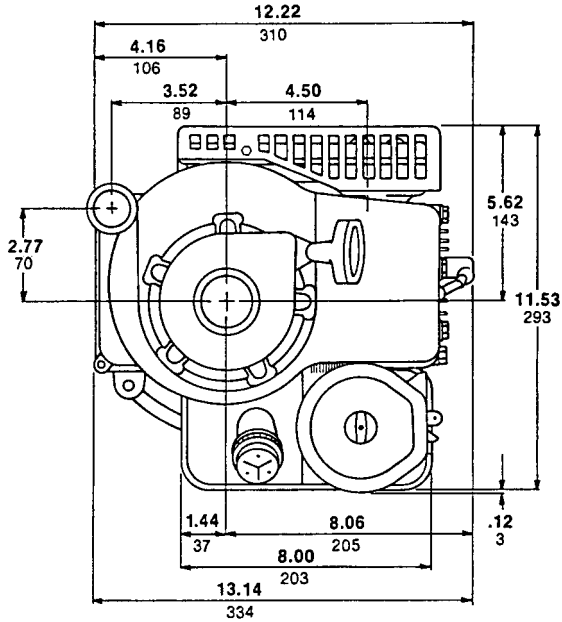
93900 to 93999

Original Engine			Make From		Remove		Add		Note	Change to Type	Trim	RPM	Short Block		
Type	Model	Crank	Model	Type #	Qty	Part #	Qty	Part #					Part #	Notes	
0140	93902	494034	9M902	0018					73		All	3000	398213		
0141	93902	492748	9M902	0015					73		All	3500	398210		
									88						
0142	93902	492748	9M902	0015							All	3400	398210		
0143	93902	492086	9M902	0016					73		All	3200	398211		
0144	93902	494016	9M902	0015							All	3500	398210		
0145	93902	492086	9M902	0016					73		All	3500	398211		
0146	93902	492086	9M902	0016							All	3100	398211		
0147	93902	492086	9M902	0016							All	3500	398211		
0148	93902	492086	9M902	0016					88		All	3200	398211		
0149	93902	492086	9M902	0016							All	3700	398211		
0150	93906	494034	No Replacement Repair With Short Block and/or Individual Parts									All	3500	398213	
0151	93902	492748	9M902	0015					88		All	3500	398210		
0152	93902	492748	9M902	0015					73		All	3100	398210		
									88						
0153	93902	492086	9M902	0016					88		All	3200	398211		
0154	93902	492086	9M902	0016					88		All	3200	398211		
0155	93902	492086	9M902	0016					73		All	3200	398211		
									88						
0156	93902	492086	9M902	0016					88		All	3000	398211		
0157	93902	492086	9M902	0016							All	3000	398211		
0158	93902	492748	9M902	0015							All	3000	398210		
0159	93902	492086	9M902	0016					73		All	4000	398211		
									88						
0160	93902	492748	9M902	0015							All	3500	398210		
0161	93902	493618	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398212	
0200	93902	492748	9M902	0015							All	3200	398210		
0201	93902	492086	9M902	0016					88		All	3200	398211		
0215	93902	492086	9M902	0016					88		All	3200	398211		
0216	93902	492086	9M902	0016					88		All	3200	398211		
0217	93902	492086	9M902	0016					73		All	3200	398211		
									88						
0218	93902	492748	9M902	0015							All	3000	398210		
0219	93902	492748	9M902	0015					73		All	3000	398210		
									88						
0220	93902	492086	9M902	0016					88		All	3000	398211		
0221	93902	494034	9M902	0018	1	690251	1	690252			All	3500	398213		
0222	93902	492086	9M902	0016					73		All	3500	398211		
									88						
0223	93902	492086	9M902	0016					73		All	3200	398211		
									88						
0224	93902	492748	9M902	0015					73		All	3200	398210		
									88						
0225	93902	492748	9M902	0015							All	2900	398210		
0226	93902	492086	9M902	0016					73		All	4000	398211		
									88						
0227	93902	492748	9M902	0015							All	3200	398210		
0228	93902	492086	9M902	0016					88		All	3200	398211		
0229	93902	492086	9M902	0016					73		All	3200	398211		
									88						
0230	93902	493618	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398212	
0231	93982	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3200	398215	FF
0232	93902	492748	122K02	0515					25		All	3200	398210		
0233	93902	494034	122K02	0518	1	492177	1	492893	25		All	3500			
					1	690319	1	691851							
0611	93902	492748	9M902	0015					88		All	3000	398210		

93900 to 93999

Original Engine			Make From		Remove		Add		Note	Change to Type	Trim	RPM	Short Block		
Type	Model	Crank	Model	Type #	Qty	Part #	Qty	Part #					Part #	Notes	
0612	93902	492086	9M902	0016					73 88		All	3200	398211		
3111	93902	492086	9M902	0016							All	3500	398211		
3112	93902	492748	9M902	0015							All	3100	398210		
3113	93902	492748	9M902	0015							All	3100	398210		
3114	93902	492748	9M902	0015							All	3100	398210		
3115	93982	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398215	
3116	93902	492086	122K02	0516					25		All	3400	398211		
3117	93902	492086	9M902	0016							All	3100	398211		
3118	93982	492086	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398216	
3119	93902	492748	122K02	0515					25		All	3200	398210		
3120	93902	492086	9M902	0016							All	3100	398211		
3121	93902	493552	9M902	0018							All	3100			
3122	93902	492748	9M902	0015							All	3100	398210		
3123	93982	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398215	PP
3124	93982	492086	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398217	
3125	93902	493552	9M902	0018							All	3100			
3126	93982	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3000	398215	
3127	93902	494034	9M902	0018							All	3100	398213		
3128	93982	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398215	FF
3129	93902	492748	9M902	0015							All	3500	398210		
3130	93902	492748	9M902	0015							All	3100	398210		
3131	93902	494034	9M902	0018							All	3100	398213		
3132	93982	492086	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398217	
3133	93902	493618	No Replacement Repair With Short Block and/or Individual Parts									All	3300	398212	
3134	93902	492748	9M902	0015							All	3100	398210		
3135	93902	492748	9M902	0015							All	2900	398210		
3136	93902	492748	9M902	0015							All	3200	398210		
3137	93902	492748	122K02	0515	1	492177	1	492893	25		All	3200	398210		
3177	93902	492748	122K02	0515					25		All	3100	398210		
3178	93982	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3200	398214	
3180	93902	492748	9M902	0015							All	3100	398210		
3181	93902	492748	No Replacement Repair With Short Block and/or Individual Parts									All	3100	398215	PP
3610	93902	492086	9M902	0016					88		All	3400	398211		
3611	93902	492086	9M902	0016							All	3100	398211		
3612	93902	492086	9M902	0016							All	3100	398211		
3613	93902	492086	9M902	0016					88		All	3100	398211		
3614	93902	492086	9M902	0016							All	3100	398211		
3615	93902	493846	9M902	0018							All	3100			
4001	93902	492748	122K02	0515					25		All	3100	398210		
4002	93902	492086	122K02	0516					25		All	3100	398211		
4003	93902	492086	122K02	0516					25		All	3000	398211		
4004	93902	492748	122K02	0515	1	492177	1	492893	25		All	3100	398210		
4005	93902	492086	122K02	0516	1	492177	1	492893	25		All	3100	398211		
5189	93902	492086	9M902	0016							All	3200	398211		
5500	93902	492748	122K02	0515					25		All	3200	398210		
5501	93902	492086	122K02	0516					25		All	3200	398211		
5502	93902	492748	122K02	0515					25		All	3200	398210		
5503	93902	492086	122K02	0516					25		All	3200	398211		
5505	93902	492086	122K02	0516					25		All	3200	398211		
7001	93902	492086	9M902	0016							All	3100	398211		

MODEL 93900



HOLE IN DECK FOR OIL SUMP TO BE 6.88 (175) DIAMETER. SUMP PROJECTION BELOW DECK MOUNTING FACE REQUIRES CLEAR SPACE. .56 (14) DEEP x 6.88 (175) DIA. PLUG CLEARANCE FOR OIL DRAIN PLUG.

MODEL 120000

