

# EP210--ENGINE PART S80 COMER

EP

ENGINE  
SECTION

210

PREFIX

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PART  
NUMBER

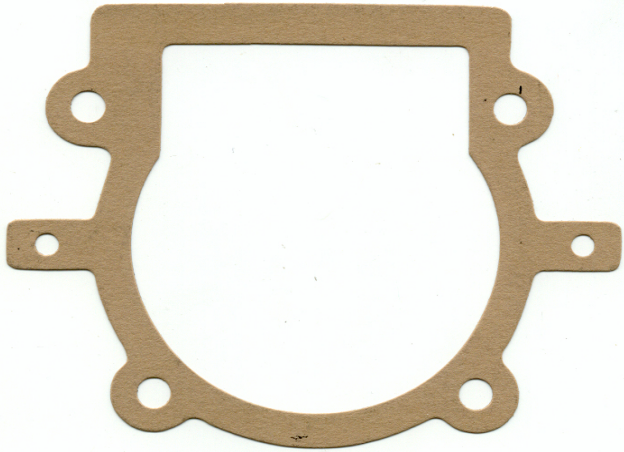


Bearing Piston [ Little End ]  
Bearing Clutch  
Bearing Main  
Clutch Parts  
Crankcase  
Crankshaft  
Cylinder  
Gaskets Cylinder  
Ignition Parts  
Piston & Parts  
Seals  
Stator , Rotor

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## GASKETS COMER S80



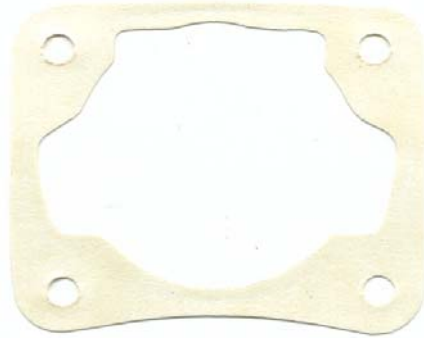
**Gasket Crankcase**  
**EP210 S80036**



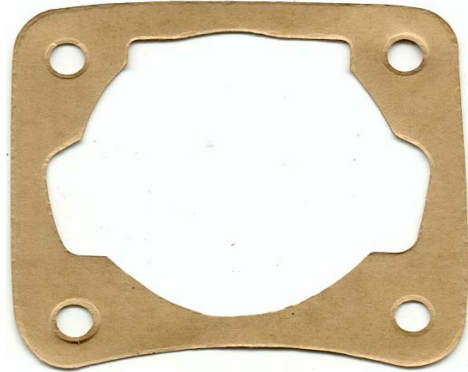
**Gasket To Cylinder**  
**EP210 S80069**



**Gasket Carburetor**  
**EP210 S80073**



**Gasket Cylinder Base Nomex**  
**EP210 S80057A [ .08mm ]**  
**EP210 S80057B [ .25mm ]**



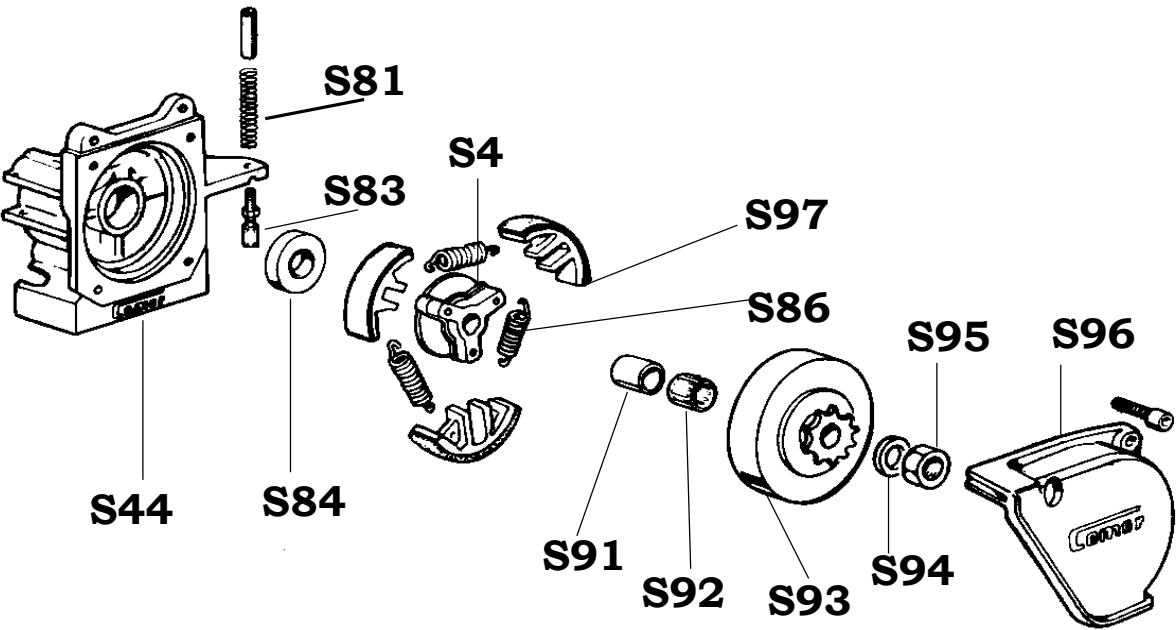
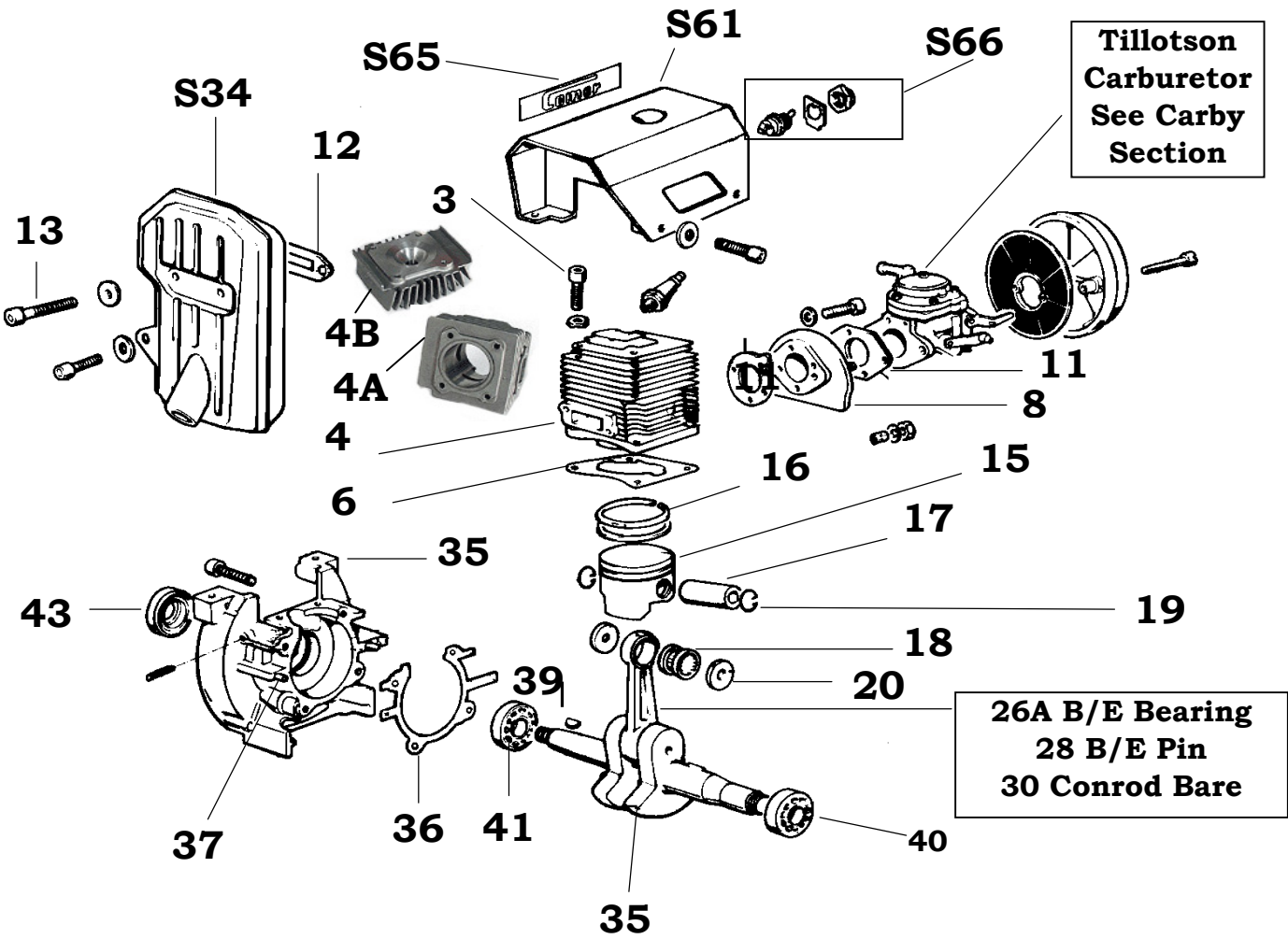
**Gasket Cylinder Base**  
**[ .25MM ]**  
**EP210 S80057B1**



**Gasket Exhaust**

**EP210 S80035**

# COMER S80/W80 ENGINE



ENGINE PARTS		F I G	COMER	COMER
GENERAL			S-W80	S-W80
CYLINDER PARTS			AGS Part Number	DPE Part Number
W80/S80 CONVERSION KIT			EP210 KITW80	ECCW80-KIT
CYLINDER ASSEMBLY S80	4		EP210 S80058 <b>NOTE [2]</b>	
CYLINDER ASSEMBLY W80	4A		EP210 W80058A <b>NOTE[3]</b>	
CYLINDER HEAD W80	4B		EP210 W80059B	ECCYH
CYLINDER HEAD NUT W80	4C		EP210 W80059E	ECCYHN
CYLINDER HEAD O RING W80	4D		EP210 W80059D	ECCYHO
CYLINDER HEAD WASHER	4E		EP210 W80059D	ECCYHW
CYLINDER HEAD STUD	4F		EP210 W80059F	ECS2
BASE GASKET .08mm	6		EP210 S80057A	ECGCY01
BASE SPACER .25mm	6		EP210 S80057B	ECGCY02
CARBY PHENOLIC BLOCK	8		EP210 S80070	
CARBY PHENOLIC GASKET	11		EP210 S80069	ECGCF
CARBY MOUNT GASKET	11		EP210 S80073	ECGA01
EXHAUST GASKET	12		EP210 S80035	ECGE
EXHAUST NUT	13			
EXHAUST MUFFLER	S34		EP210 S80034	ECEX
PISTON	15		<b>NOTE [1]</b>	
PISTON RING	16		EP210 S80056	ECR
PISTON PIN	17		EP210 S80053	ECP
PISTON L/E BEARING STD	18		EP210 S80048	ECL03
PISTON CLIP WITH EARS	19		EP210 S80054	ECCP
NUT DRIVE	S95		EP210 S80095	ECCL06C
NUT DRIVE	S95		EP210 S80095	ECCL06C
WASHER DRIVE NUT	S94		EP210 S80094	ECCL06B
<b>S80 COMER</b>				
<b>Note [1] Piston Comes In 4 Sizes</b>			<b>Note [2] Cylinder Comes In 4 Sizes</b>	
EP210 S80052A			EP210 S80058A	
EP210 S80052B			EP210 S80058B	
EP210 S80052C			EP210 S80058C	
EP210 S80052D			EP210 S80058D	
<b>W80 COMER</b>				
<b>Note [1] Piston Comes In 5 Sizes</b>			<b>Note [2] Cylinder Comes In 5 Sizes</b>	
EP210 W80052AA			EP210 W80058AA	
EP210 W80052A			EP210 W80058A	
EP210 W80052B			EP210 W80058B	
EP210 W80052C			EP210 W80058C	
EP210 W80052D			EP210 W80058D	
<b>NOTE</b>				
D PISTON IS THE SMALLEST & AA IS THE LARGEST				
PISTON/BORE CLEARANCE STD. .002" TO .0025"				



Comer S-W80 Conversion kit  
EP210 KITW80



W-80 Cylinder Head  
EP210 W80059B



W-80 Cylinder Assembly  
Note [2]

ENGINE PARTS GENERAL		F I G	COMER S-W80 AGS Part Number	COMER S-W80 DPE Part Number
CRANKSHAFT PARTS				
B/END BEAR [SPACED BOTT]	26A		EP210 S80050	EP210 S80050
B/END PIN	28		EP210 S80051	ECCR01
CONROD BARE	30			
CONROD ASSEMBLY			EP210 S80049	ECCO
CRANK SHAFT ASS	31		EP210 S80040	ECCR01
C/SHAFT HALF IGN SIDE	32			
C/SHAFT HALF DRIVE SIDE	33			
C/SHAFT NUT DRIVE	34		EP210 S80095	ECCL06C
CRANKCASE ASSEMBLY	35		EP210 S80044	ECCC
CRANKCASE GASKET	36		EP210 S80036	ECGCR
KEY DRIVE SPROCKET	38		EP210 S80093	
KEY IGNITION	39		EP210 S80041	ECCU
MAIN BEARING DRIVE	40		EP210 S80042 [Note 1]	ECMB
MAIN BEARING IGNITION	41		EP210 S80042 [Note 1]	ECMB
SEAL DRIVE & IGNITION GENUINE	42		EP210 S80043	ECS01
SEAL DRIVE & IGNITION NON GENUINE	43		EP210 S80043A	
<b>Note 1</b> Use <b>EPRCC232291</b> Bearings				

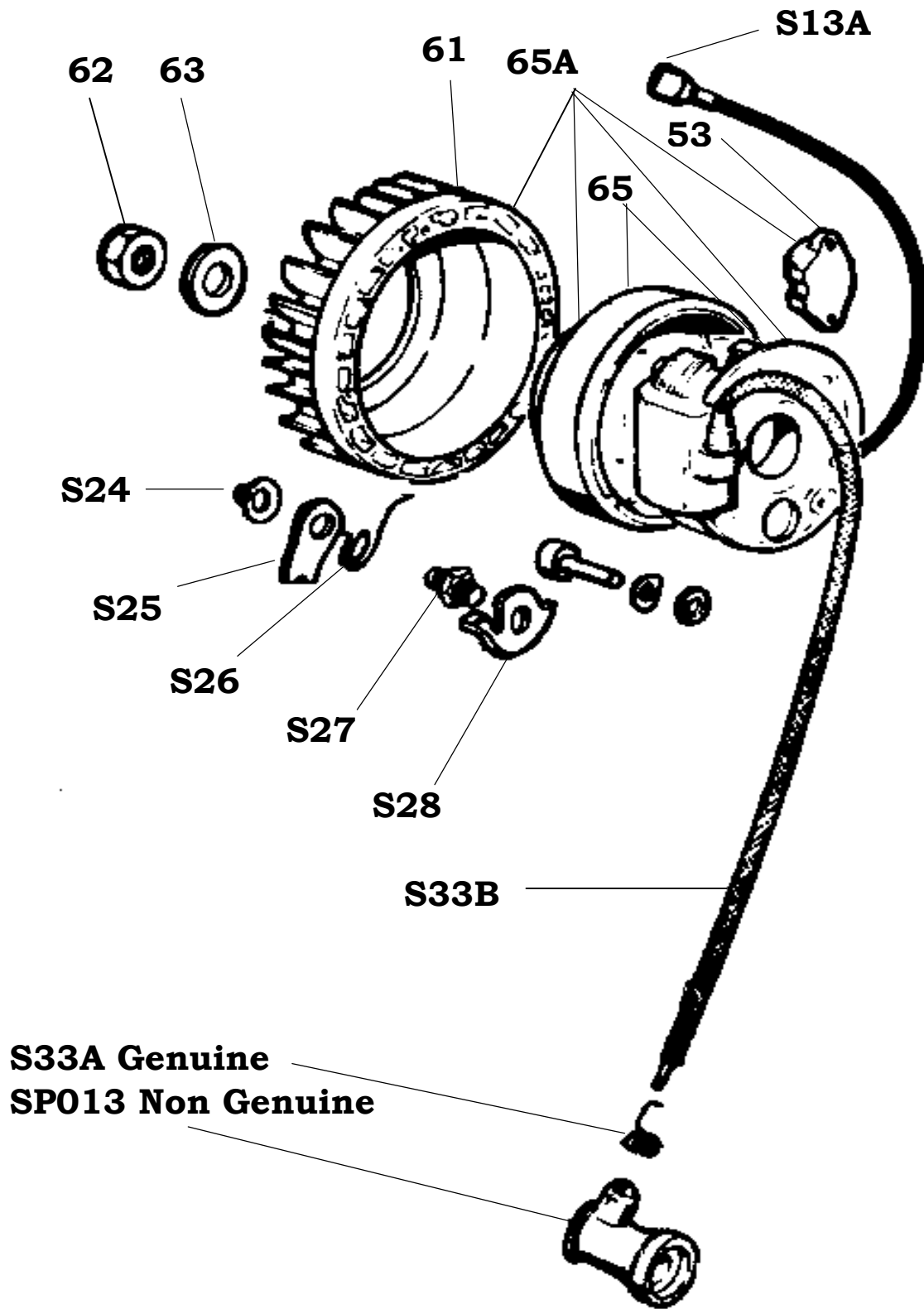


Non Genuine Crankshaft Seals  
Double Lip , Viton Material

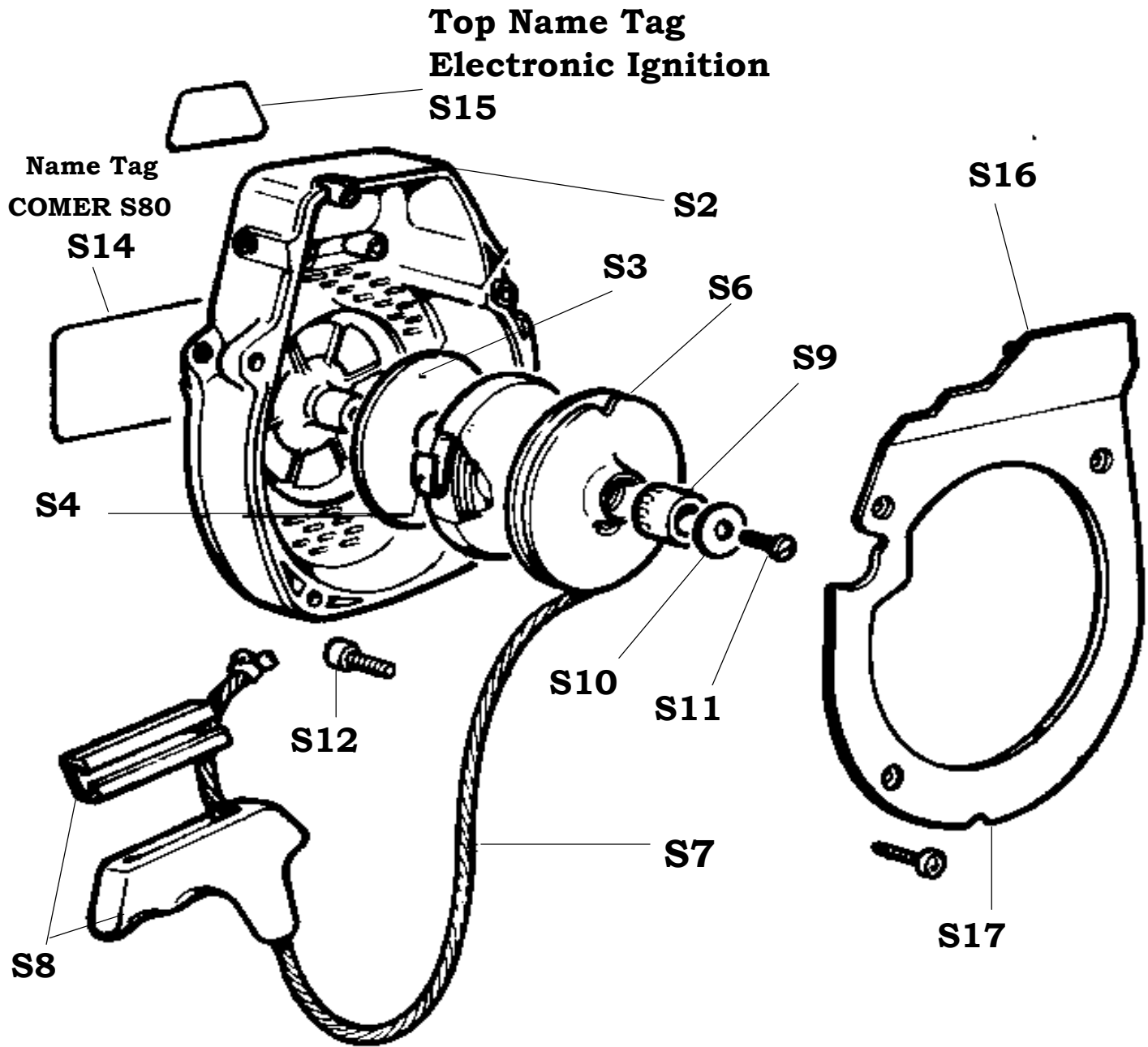


High Quality Main Bearing  
polyamide Cage

# COMER S80 IGNITION



# COMER S80 PULL START



<b>ENGINE PARTS</b>	<b>F I G</b>	<b>COMER</b>	<b>COMER</b>
<b>GENERAL</b>		<b>S80</b>	<b>S80</b>
<b>IGNITION PARTS</b>		<b>AGS Part Number</b>	<b>DPE Part Number</b>
IGN TCI/CDI MODUEL	S53	EP210 S80063	ECIM
IGN LEAD JOINER NGK		EPY639A	
IGN LEAD REPLACEMENT NGK		EPY639	
IGN LEAD GENUINE INC CAP	S33B	EP210 S800S33B	ESISP
MAGNETO ASSY, [COMPLETE]	65A	EP210 S80065A	ECIA
IGN ASSY, [COMPLETE]	65	EP210 S80065	ECIST
SPARK PLUG CAP & SPRING	S33A	EP210 S800S33A	ECISPC
STARTER RATCHET SPRING	S26	EP210 S80026	ECIS
STARTER RATCHET	S25	EP210 S80025	ECIRA
FAN FOR FLYWHEEL	61	EP210 S80022	ECIF
IGN ROTOR NUT	62	EP210 S80019	ECINC
IGN ROTOR NUT WASHER	63	EP210 S80020	ECINW
CLIP SPRING RACHET	S24	EP210 S80024	ECICC
PIVOT RACHET SPRING		EP210 S80034	ECIP

<b>ADDITIONAL PARTS</b>			
CLUTCH SHOES & SPRINGS COMP,	S97	EP210 S80087	ECCL03A
CLUTCH DRUM 12 TEETH	S93	EP210 S80093C	ECCL06A
CLUTCH BEARING	S92	EP210 S80092	ECCL05
CLUTCH WASHER	S94	EP210 S80094	ECCL06B
CHAIN GUARD	S95	EP210 S80096	ECCL07
STARTER ROPE	S7	EP210 S80007	ECRES04
STARTER ROPE HAND GRIP	S8	EP210 S80008	ECRES05
STARTER ROPE DRUM	S6	EP210 S80002	ECRES04
STARTER COVER	S2	EP210 S80002	ECRES00
STARTER COVER BACK SECTION	S16	EP210 S8002A	ECRES01
STARTER RECOIL SPRING	S4	EP210 S80004	ECRES02
STARTER ROPE DRUM BEARING	S9	EP210 S80009	ECRES06
STARTER ROPE DRUM WASHER	S10	EP210 S80010	
MUFFLER [BOX TYPE]	S34	EP210 S80034	ECEX
STICKERS CYLINDER COVER	S65	EP210 S8000S65	ECIST
STICKERS NAME PLATE LOWER	S14	EP210 S800014	ECNP01
STICKERS TOP PLATE IGNITION	S15	EP210 S800015	ECNP01U
CLUTCH SLEEVE BEARING	S91	EP210 S80091	ECCL04
TOP CYLINDER COVER	S61	EP210 S800S61	ECCYC
RATCHET SPRING PIVOT	S27	EP210 S80027	ECIP

**Note 1**



# ENGINE COMER S/W80



**THIS COMPACT ENGINE IS ONLY 81cc CAPACITY  
SINGLE CYLINDER 2 STROKE  
BORE--52mm  
STROKE--38mm  
IGNITION--ELECTRONIC  
CLUTCH--CENTRIFUGAL  
CYLINDER--CHROME PLATED**

**ABLE TO USED IN AKA IN MIDGETS/CADETS ONLY  
[ 2000 RULES ]**

**ALSO AVAILABLE IN S60 & K80 VERSIONS  
NOT TO BE USED IN AKA RACING**

# Comer S80 / W80 – the facts!



At the 2005 AKA AGM, the Comer W80 was approved for use in 2006.

Before the meeting there were the usual internet based stories going around that this also involved a different crankshaft, the cost to the competitor would be thousands of dollars and everyone would have to buy a new engine.

Naturally, none of this is true. DPE are mindful about any change and we do our best never to make decisions that may potentially. The reason for the change was that early in 2005, Comer, Italy advised that the tooling to produce the S80 cylinders was worn and in need of replacement. The cost to do this was some 85,000 EU and advised us that it was not economically feasible as Australia was the only market still using this particular type of engine, therefore we should consider alternative versions, such as the W80.

## Technical issues

The W80 engine is different to the S80 in that it has a removable cylinder head. There are some other minor differences, such as to convert a S80 to a W80 also requires changing the cylinder/head cover and various other bits such as studs etc. The ignition, the crankshaft, the carby, in fact everything else is the same.

The W80 will offer better parity between engines as the cylinder position can be set independent of the head, unlike the S80. There was some initial skepticism regarding the W80 as some of the Technical committee felt it would be perceived the W80 would be faster. Independent dyno testing by National Technical Officer, Kevin McKinnon proved the performance of the engines to be identical. However in order to counter this perception, the W80 was approved with slightly *larger* head volume.

## Special offer

For those who do wish to change to W80 spec, we have been able to negotiate with Comer, 250 kits to convert S80's to W80's. The price of these kits is exactly the same price as just the S80 cylinder.

## Ongoing testing

Although significant dyno testing was carried out prior to the AGM, on track testing will also be done to ensure the performance of the two types of engines is as close as possible. AKA Technical Officer, Kevin McKinnon in conjunction with DPE will carry

## Lead Time

Once the specification has been completely settled, there is a 100 day lead time for Comer to produce engines, plus shipping etc, Therefore it is likely that W80 engines and W80 conversion kits will not be available until late 2006 or early 2007.

### Here are the advantages that the W80 offers

1. Improved parity between engines
2. No cost to karters – no one has to buy a W80 cylinder kit
3. In fact, there will be some disincentive to do so as the minimum head volume of a W80 will be larger than the S80. We are still testing and evaluating what exactly the W80 head volume needs to be to achieve parity.
4. If competitors wish to change to the W80, the W80 conversion kit it will cost them exactly the same as a S80
5. The W80 engine will be the same price as the S80 engine
6. Guaranteed supply of the W80 for 10 years
7. Stability in the important Midget class