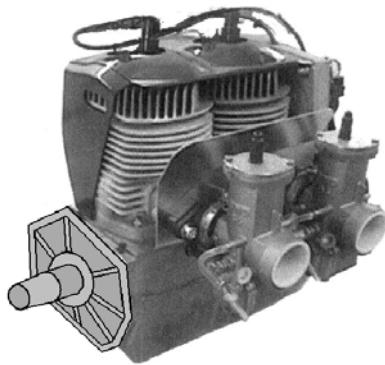




## HIRTH 3203 Carburated - 65 hp



HIRTH's most popular engine. The 3203 produces more horsepower and torque per pound than any other engine in its power class. Hirth 3203 is the forerunner in power plants for the heaviest of ultralight trainers, gyrocopters and light experimentals today.

3203 incorporates Al-Nikasil coated cylinders for superior performance and reliability. Al-Nikasil in simple terms is a nickel based material, applied in a paste form, when super heated it becomes part of the cylinder itself. Al-Nikasil provides for a super low coefficient of friction, reducing engine heat and wear. The pistons and cylinders expand at the same rate thus providing for a seizure resistant engine. 3203 crankshaft is 4130 chromemolly steel. Heads, cylinders, rings, block casting, connecting rods and associated components are all of the highest grade alloys available today.

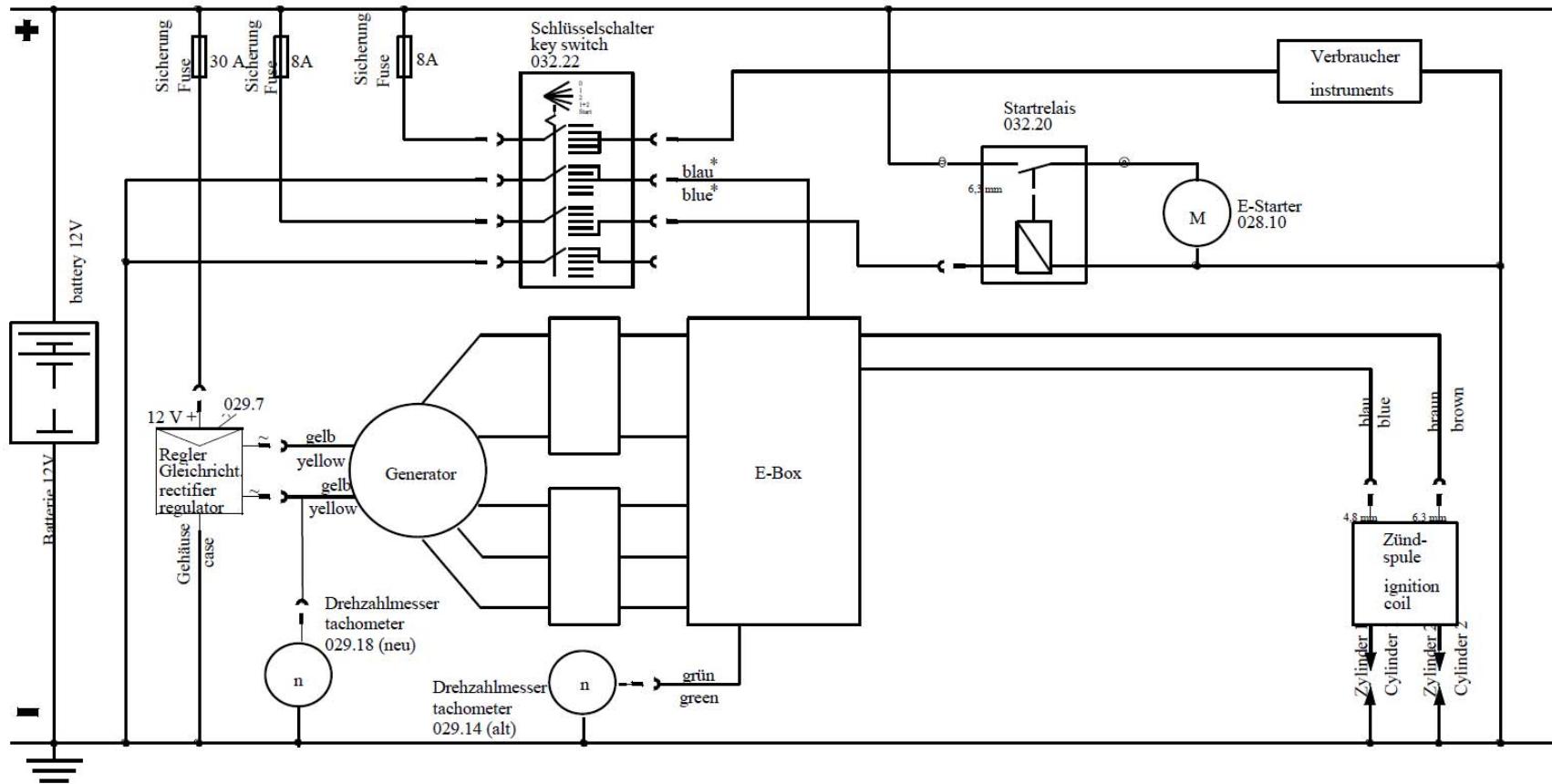
2706 - 65Hp engine shown with fan cooling

### Technical Data:

Model:	3203 2 cycle, two cylinder in line	Carburetion:	Dual 38mm slide type or optional fuel injection
	fan cooled	Fuel Pump:	Auxiliary external pneumatic
Bore:	2.99" [76 mm]	Lubrication:	Premix - 50:1 ratio or optional oil injection
Stroke:	2.72" [69 mm]	Rotation:	Counter clockwise, viewed from output end
Piston Diameter:	2.986" [75.84mm]	Ring Gap:	0.009" [0.23mm]
Cylinder Diameter:	2.991" [75.97mm]	Starter:	12 VDC electric, recoil or both/250 watt charging.
Displacement:	625 cc	Cooling:	Optional - Axial fan or free air cooled by prop.
Compression:	9.5 : 1	Ignition:	Single CDI (Capacitive discharge Ignition)
HP Output:	65hp [48.5 kW] @ 6300 rpm	Weight:	82 lbs. fan cooled including Elec.
Torque:	56ft. lbs. [76 Nm] @ 5700 rpm		start and exhaust.
TBO	1000 Hrs. Rated at 75% power		

Engine	3203 - 65 HP FC
Ign. Timing @ 2000 Carbureted	16° BTC
Ign. Timing @ 2000 Fuel Injected	18° BTC
Spark Plug Heat VI	280
Spark Plug Gap	.020-.024
No. of Carburetors	Two
Carburetor ID #	Dellorto PHBE 34 BD 8
Main Jet	160 : 155 & 158 Available
Idle Jet	40
Jet Needle	K 35
Needle Jet	AB 268
Needle Position	1
Do not exceed RPM	6600
Peak HP RPM	6300
HP @ Peak RPM	65
Peak Torque RPM	6000
Peak Torque Ft. Lb.	55
Maximum CHT	535° F
Maximum EGT @ full power	1256°F
Maximum EGT @ cruise RPM	1330°F
Spark Plug Denso	W24 FSR - U10*

\*Optional Plugs: NGK BRGHS  
Champion RL86C or #830



This wiring diagram is to be considered as a proposal for wiring

General size of line wire: 1,5 mm<sup>2</sup>

Size of line from/to E-Starter: 16 mm<sup>2</sup>

Rectifier-regulator mount on cooling body (ca. 250x200x5mm)

\* Minimum distance to other current wires: 100 mm (4 in.)

f	e	d	c	b	a	Tag	Name
Buchstabe	Anzahl	Aenderung	Tag	Name		Gezeichnet:	04.07.00
						Geprüft:	04.07.00
						Schaltplan CDI – Einfachzündung PVL	Rögele
						Wiring diagram – single ignition PVL	Rögele
						F23	
						2702./03, /04, /05, /06, 3202/03, 3502/03	
						Zeichnungs-Nr.	14 AA 104

# 65HP Cylinder Single Ignition

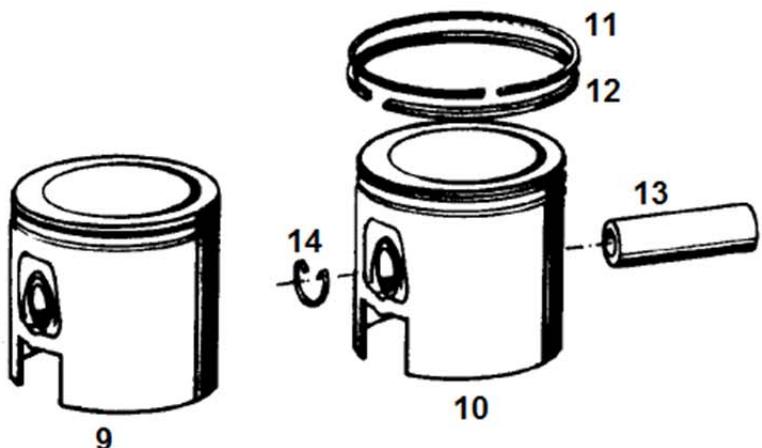
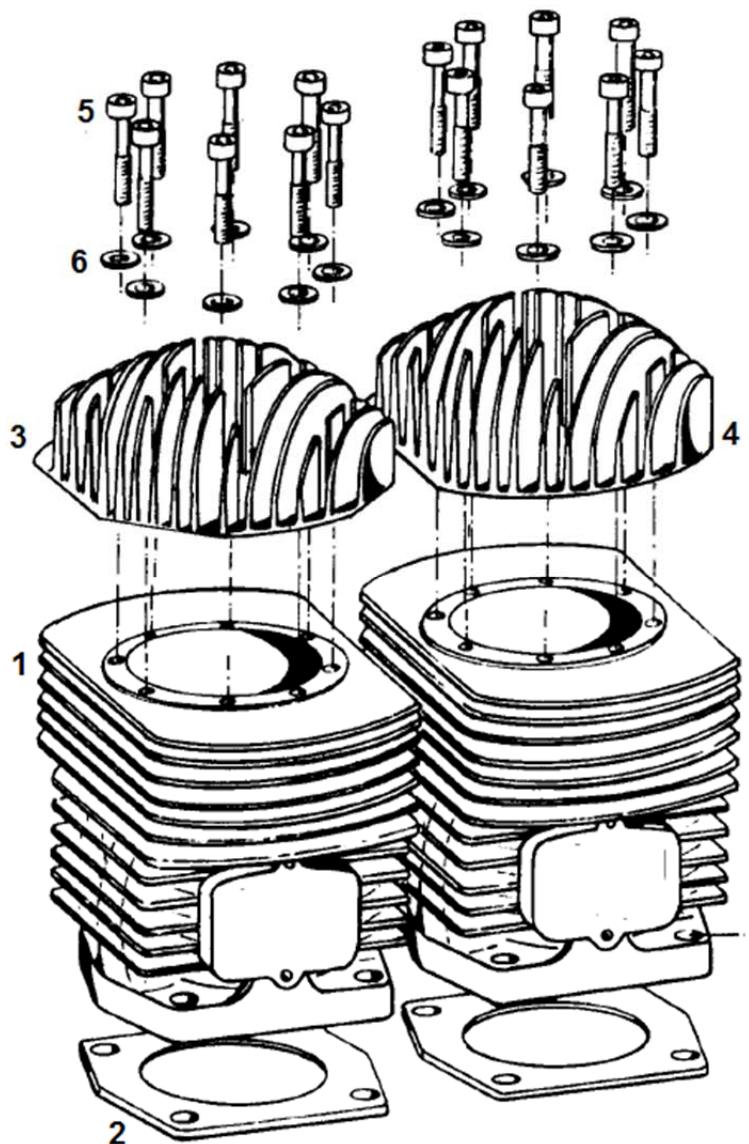


Figure A

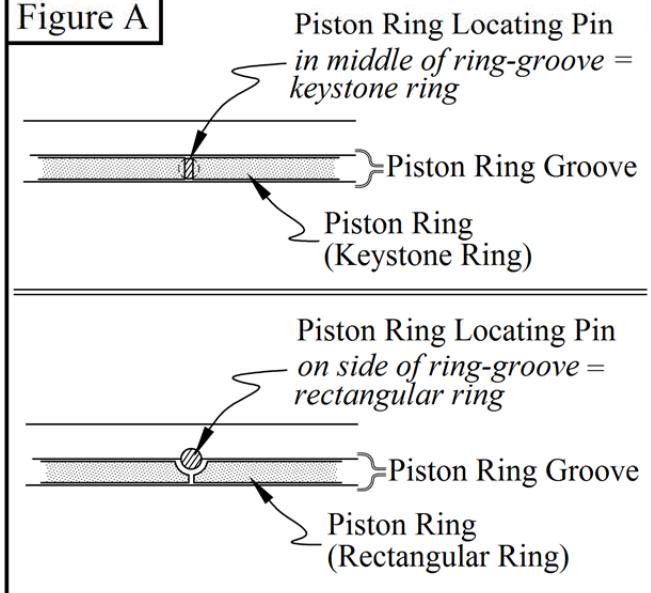
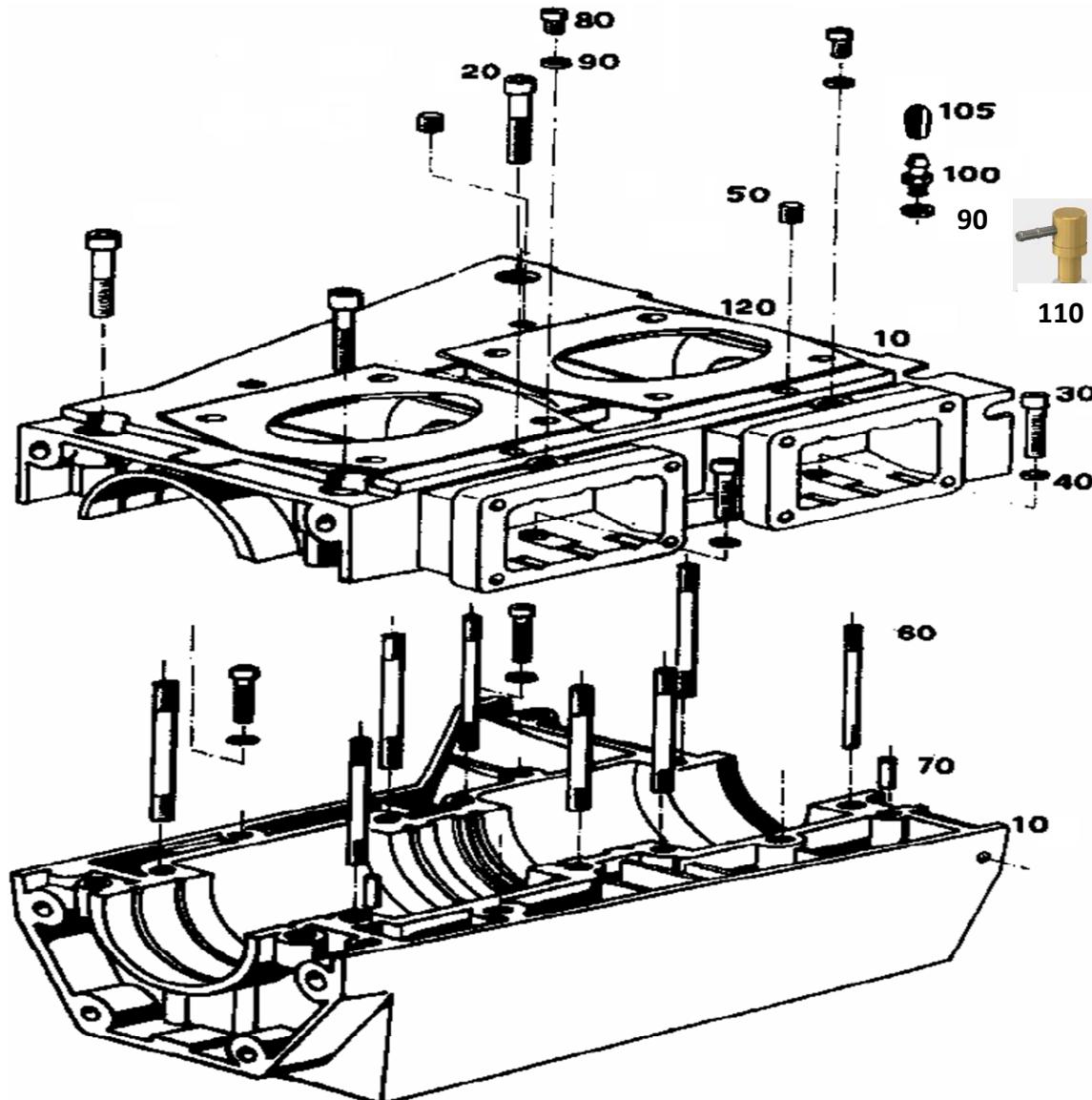


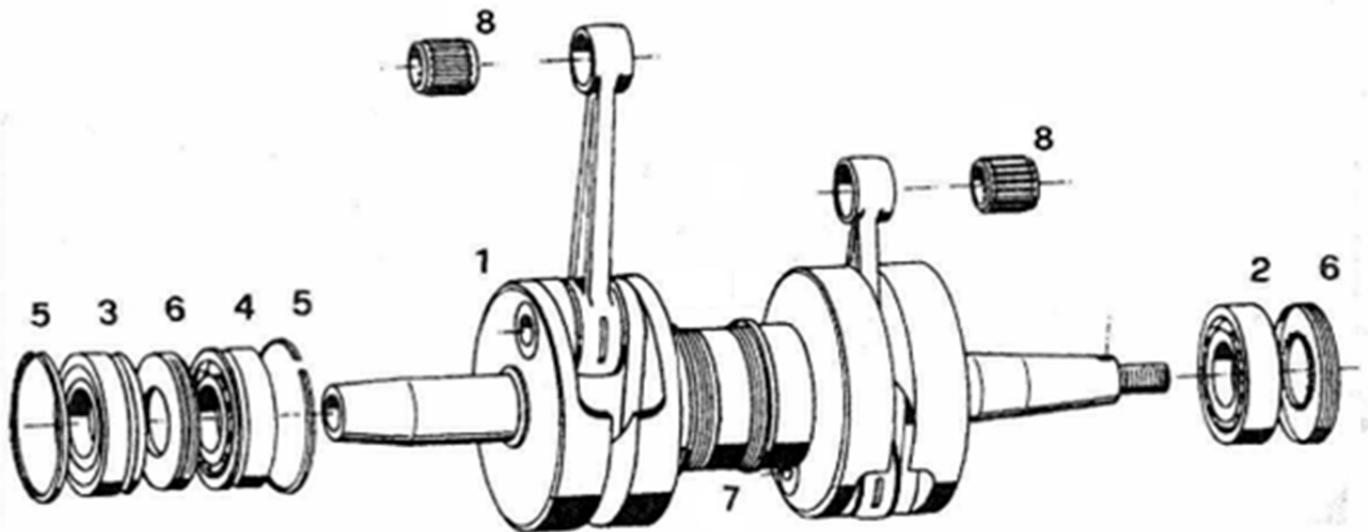
Fig. No.	Qty.	Description	Neoteric Part #	Remark / Note
1	2	Cylinder	6099	
2	2	Cylinder base gasket	5455	See Form 17368 for Gasket set
3	1	Rear Cylinder head	5457	
4	1	Front Cylinder head	5458	
5	16	Cylinder screw	6911	Torque = 23 - 26 Nm (17 - 19.2 ft-lb)
6	16	Washer	5994	
7	8	Washer	6234	
8	8	Hexagon head nut	6233	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb)
9	2	Piston Set	5450	Includes 10 - 14
10	-	Piston	7210	
11	-	Keystone Piston-Ring	5452	* Examine locating pin position in both upper & lower Ring-Grooves on piston to determine Ring type, as shown in <b>Figure "A"</b>
12	-	Rectangular Piston-Ring	5451	
13		Wrist Pin	5972	
14		Retaining ring (circlip)	6301	

**Spare part list - 65 HP Single Ignition  
Crankcase 3203**



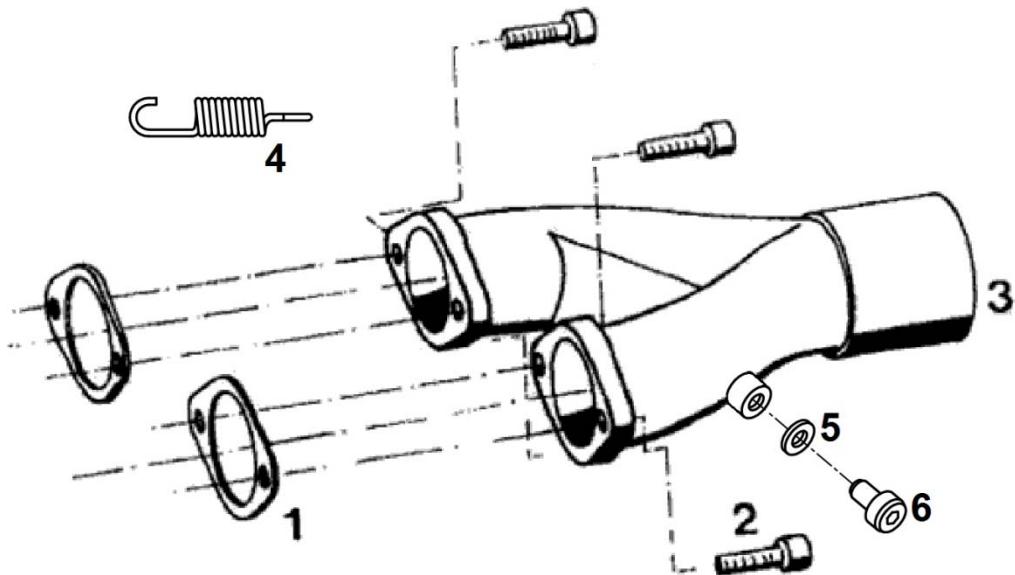
<b>Fig. No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part #</b>	<b>Remark / Notes</b>
10	1	Crankcase, complete	7164	Included Figures 60 - 70
20	3	Cylinder screw	7937	Torque = 23 - 25 Nm [17 - 18.4 ft-lb]
30	4	Cylinder screw	2289	Torque = 9 - 11 Nm [6.6 - 8.1 ft-lb]
40	4	Washer	6916	
50	4	Threaded Pin Grub Screw	9003	Loctite 243
60	8	Stud screw	7163	Loctite 243
70	2	Plug tip	7936	Loctite 586
80	2	Cylinder screw	9004	Only 1 Required for Carbureted engines
90	2	Sealing ring, AL	5629	
100	1	Pulse line / Crank Case vac. nipple	5630	Carburetor engines only.
105	1	Dust Cover / Boot	7208	
110		Oil injection nipple	5490	Oil inj. Engines with fuel inj.
120		Cylinder Base Gasket	5455	See form 17749 for gasket set
-		Rubber Gasket Sealant	7842	Use as crankcase gasket

## Crankshaft 3203



<b>Fig. No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part #</b>	<b>Remark / Notes</b>
1	1	Crankshaft, complete	<b>5449</b>	Includes items 2 - 7
2	1	Deep groove ball bearing	<b>5460</b>	
3	1	Deep groove ball bearing	<b>5461</b>	
4	1	Deep groove ball bearing	<b>5462</b>	
5	2	Circlip	<b>7912</b>	
6	2	Shaft sealing ring	<b>5453</b>	
7	1	Space ring	<b>7913</b>	
8	2	Needle Bearing, Blue dot (#1)	<b>7909</b>	* Connecting Rods are Color-Coded with a Paint Dot on the Piston end.
		Needle Bearing, Yellow dot (#2)	<b>6082</b>	Engines built from 2010 onward also include a Number Code next to the Paint Dot. The coding corresponds to the correct Needle bearing size. (Approx 0.0003" [0.008mm] graduation between each size)
		Needle Bearing, Red dot (#3)	<b>6083</b>	
		Needle Bearing, White dot (#4)	<b>5464</b>	Blue (#1) is the smallest and Green (#5) is the largest. Connecting rods with a Red (#3) dot are most common.
		Needle Bearing, Green dot (#5)	<b>7910</b>	If the paint dot is missing and no number code can be found, all bearings must be tried for the best fit.

**65HP Exhaust Header Pipe  
(Y-Pipe)**



<b>Fig. No.</b>	<b>Qty.</b>	<b>Designation</b>	<b>Neoteric Part #</b>	<b>Remark / Notes</b>
1	2	Exhaust gasket	<b>5245</b>	
2	4	Cylinder screw	<b>6932</b>	Torque = 23 - 28 Nm (17 - 20.1 ft-lb)
3	1	Exhaust manifold	<b>5340</b>	Prepared for temperature meas.
4	4	Exhaust Spring	<b>5421</b>	
5	2	Copper Washer	<b>7077</b>	
6	2	M8x1x10 SHCS	<b>6934</b>	EGT Plugs; used when no EGT is installed

### Fan cooling system 3203

Flat Belt  
Cooling Fan  
(Old Style)

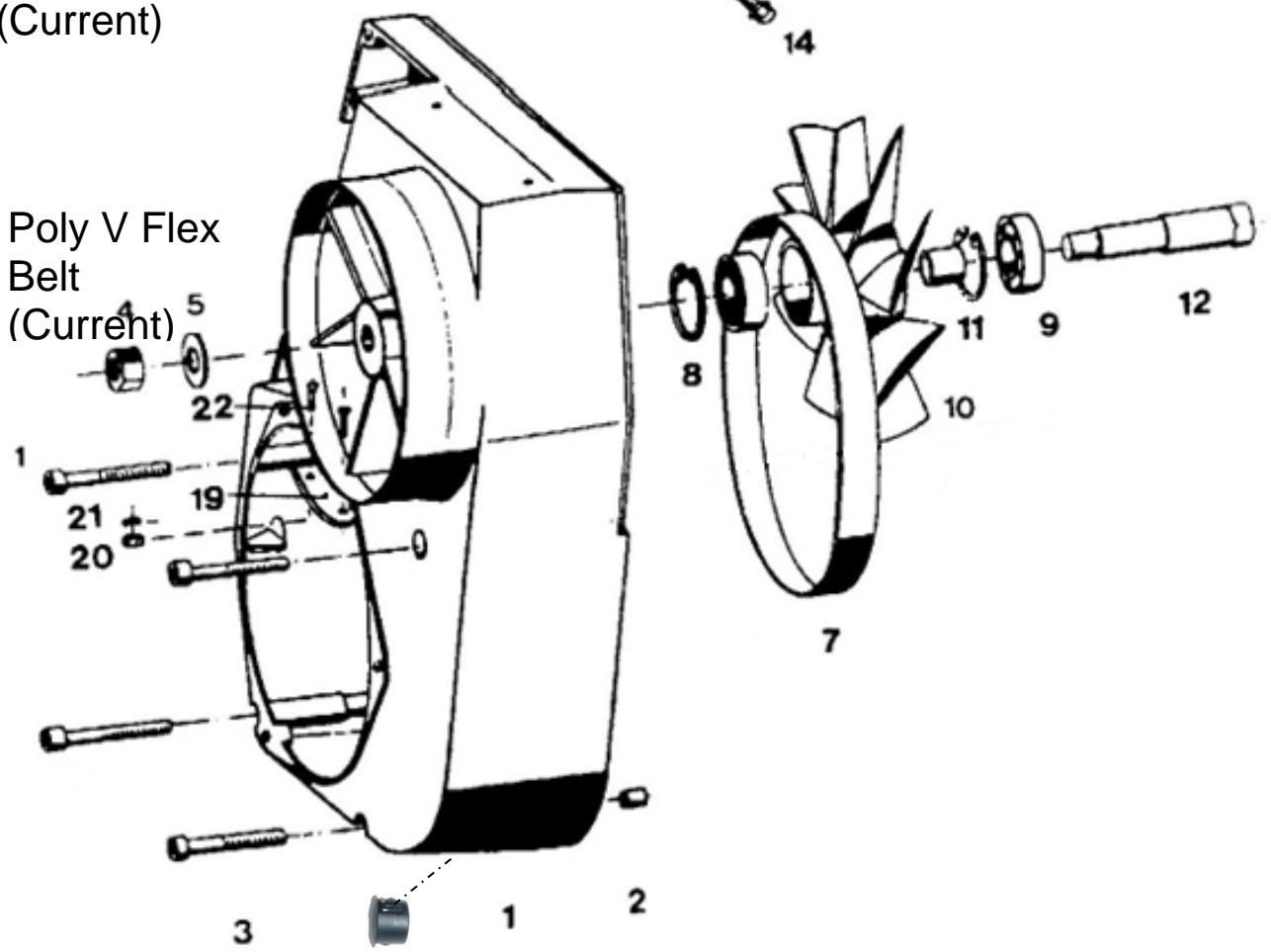
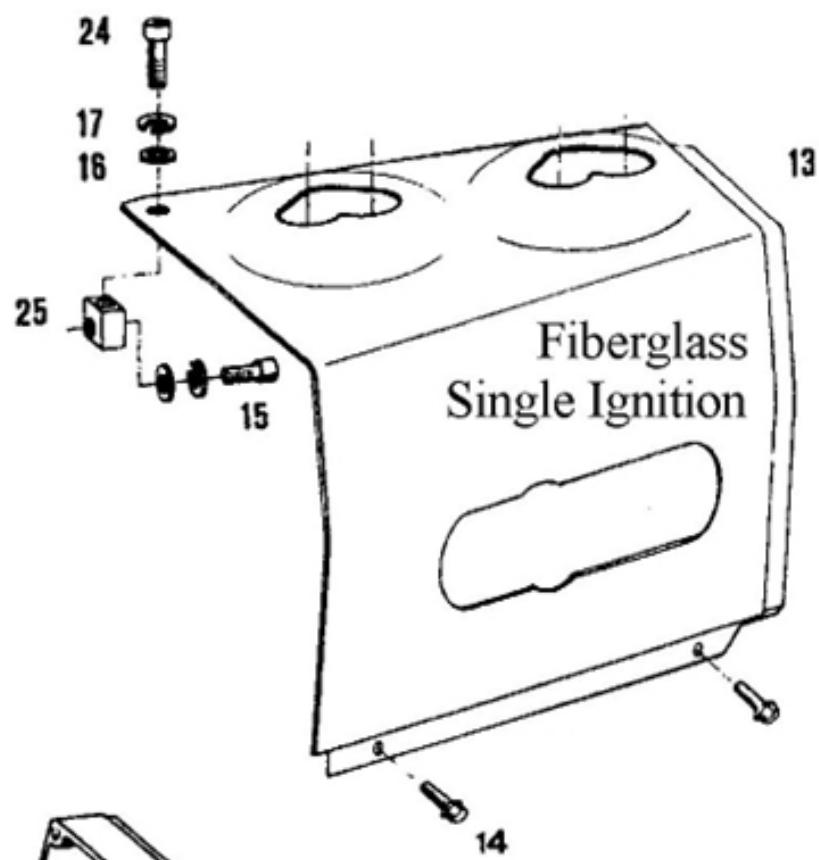


Flat Belt  
(Old Style)

Poly V Belt  
Cooling Fan  
(Current)



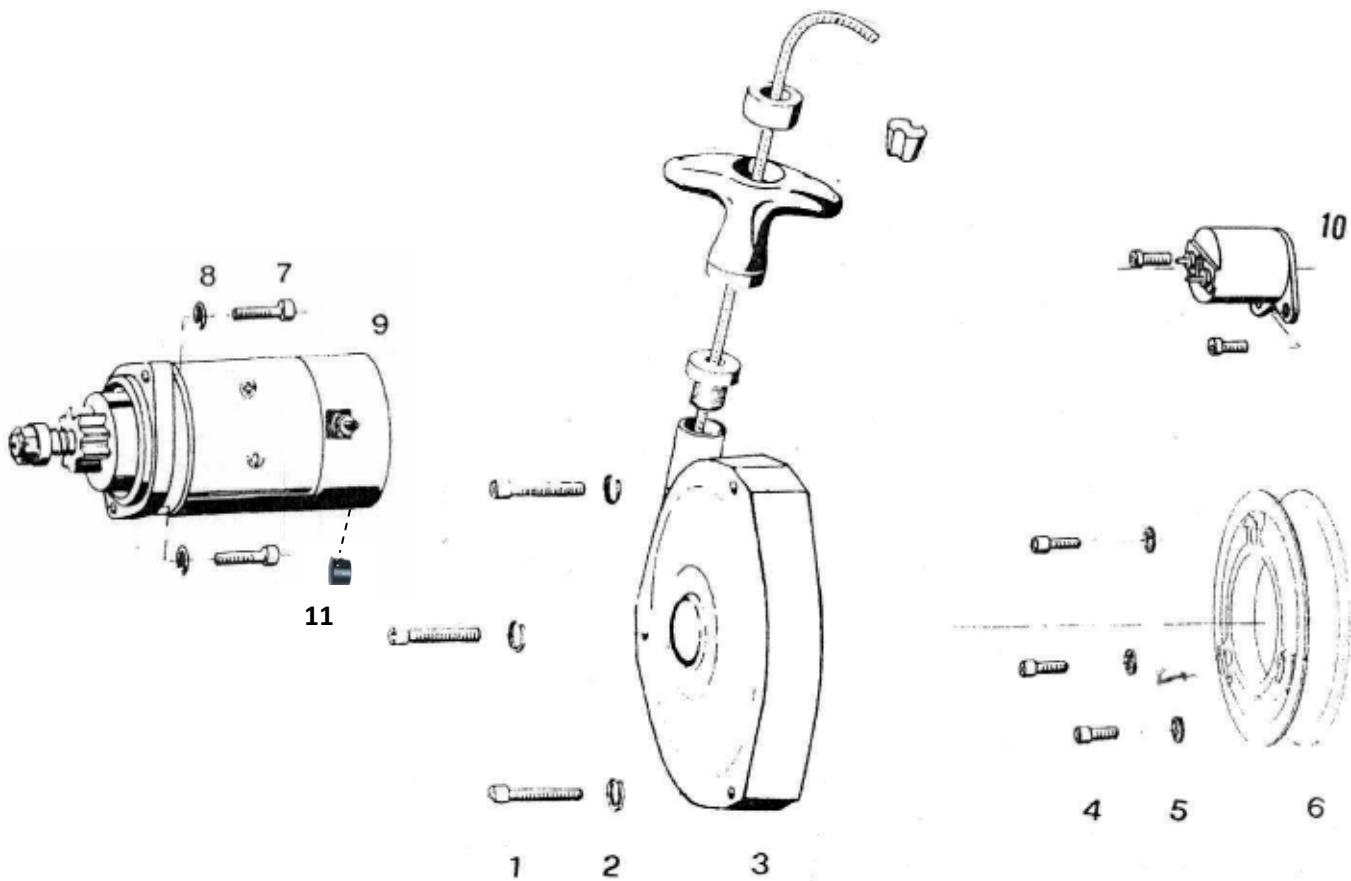
Poly V Flex  
Belt  
(Current)



## Fan cooling system 3203

<b>Fig. No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part No</b>	<b>Remark&gt;Note</b>
1	1	Fan housing, complete	<b>9020</b>	Includes Fig No. 4, 5, 6, 10*, 12, 19, 20, 21
2	3	Alignment sleeve	<b>7939</b>	
3	4	Cylinder screw	<b>3258</b>	Md = 9,6...11 Nm
4	1	Hexagon head nut	<b>6855</b>	Md = 27...30 Nm
5	1	Washer	<b>6856</b>	
7*	1	Flat belt	<b>3407</b>	*Used up to model year 2008 (Engine #901105 & Lower)
7	1	Poly V Flex belt	<b>6390</b>	Currently used, from 2008 onward (Engine #901106 & Higher)
8	2	Locking ring	<b>7940</b>	
9	2	Deep groove ball bearing	<b>6887</b>	
10*	1	Fan wheel Assy, Flat belt	<b>3408</b> <b>(5879 – modified)</b>	Incl. Pos. 8, 9, 10, 11 *Used up to model year 2008 (Engine #901105 & Lower)
10	1	Fan wheel Assy, Poly V	<b>6391</b>	Incl. Pos. 8, 9, 10, 11 Currently used, from 2008 onward (Engine #901106 & Higher)
11	1	Bushing	<b>7941</b>	
12	1	Eccentric shaft	<b>6857</b>	
13-B	1	Air guide cowl - SI	<b>5324</b>	Single ignition
14	2	Thread screw	<b>5997</b>	
15	1	Cylinder screw	<b>6901</b>	Md = 9,6...11 Nm
16	2	Washer	<b>6916</b>	
17	2	Spring ring	<b>5999</b>	
19	1	Metal plate	<b>6183</b>	
20	2	Hexagon head nut	<b>2694</b>	
21	2	Washer	<b>7942</b>	
22	2	Screw	<b>2693</b>	
23-A	2	Rubber grommet		For dual ignition engines
23-B	2	Rubber grommet	<b>9021</b>	For single ignition engines
24	1	Cylinder screw	<b>5998</b>	Md=9,6... 11 Nm
25	1	Air guide mounting block	<b>6928</b>	
26	1	Sheet	<b>5981</b>	Not on Sketch
27	1	Hole Plug	<b>2449</b>	Covers Hole In Housing

**65HP Starting Device  
(3203)**



<b>Fig. No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part #</b>	<b>Remark&gt;Note</b>
1	3	Cylinder screw	<b>6911</b>	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb)
2	3	Spring ring	<b>6940</b>	
3	1	Starter, mounted	<b>5267</b>	
4	3	Cylinder screw	<b>7944</b>	Torque = 23 - 28 Nm (17 - 20.7 ft-lb)
5	3	Tab washer	<b>5995</b>	
6*		Driving dog with starter, Flat	<b>6189</b>	*Used up to model year 2008 (Engine #901105 & Lower)
6	1	Driving dog with starter, Poly-V	<b>6389</b>	Currently used, from 2008 onward (Engine #901106 & Higher)
7	2	Cylinder screw	<b>2348</b>	Torque = 23 - 28 Nm (17 - 20.7 ft-lb)
8	2	Tab washer	<b>5995</b>	
9	1	Starter	<b>5545</b>	
-	1	Alternative Starter	<b>6498</b>	
10	1	Starter Solenoid	<b>5417</b>	
11	1	Starter Hole Plug	<b>9172</b>	Used to plug drain hole in starter

## 55/65HP Ignition System

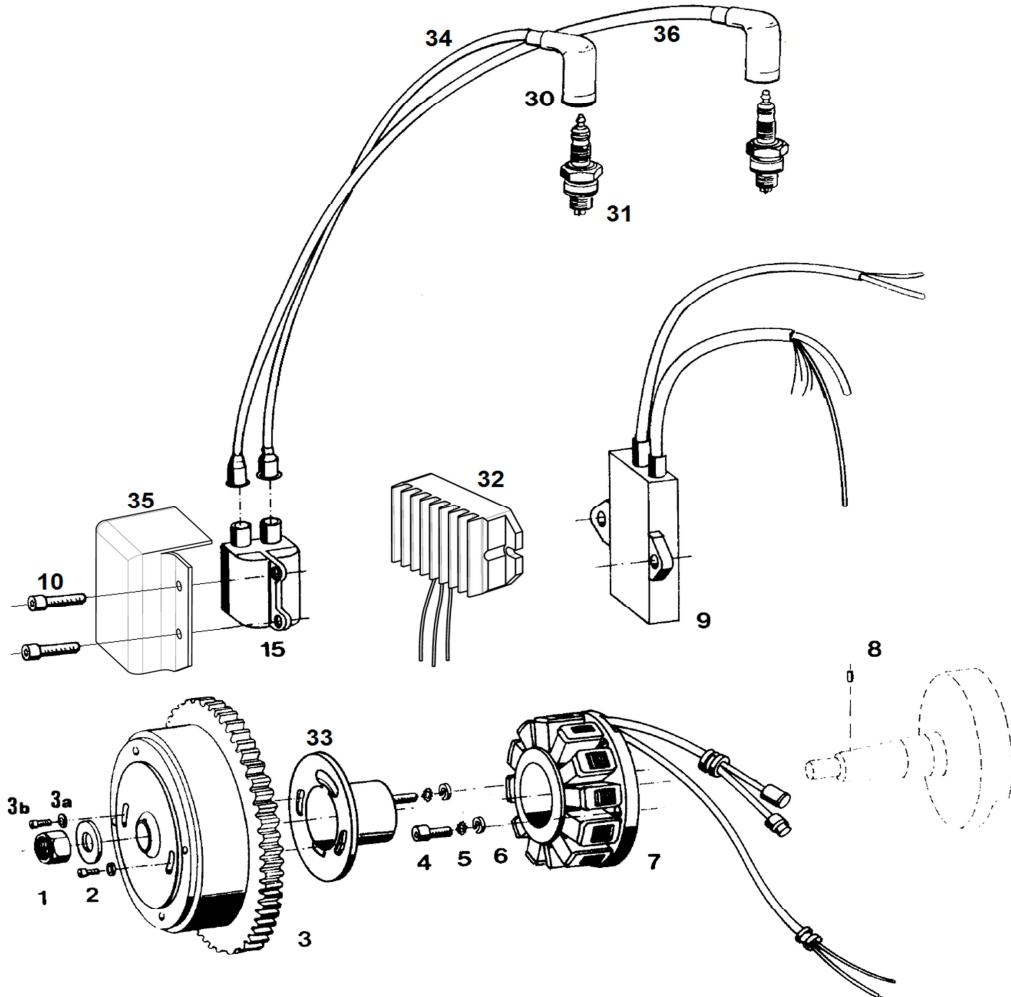


Fig. No.	Qty.	Description	Neoteric Part #	Remark/Notes
1	1	Hexagon head nut	<b>6939</b>	Torque = 140 - 150 Nm (103.3 - 110.6 ft-lb)
2	1	Washer	<b>7196</b>	
3	1	Flywheel with gear ring	<b>7984</b>	Includes fig. 3a, 3b, 33
4	2	Cylinder screw	<b>7182</b>	Neoteric does not stock
5	2	Washer	<b>5994</b>	
6	2	Washer	<b>6936</b>	Torque = 4 - 4.5 Nm (3 - 3.3 ft-lb)
7	1	Stator plate complete	<b>5591</b>	
8	1	Flywheel alignment pin	<b>7985</b>	
9	1	CDI - Box	<b>5664</b>	Mounted with silicone
10	2	Coil Mounting Screw	<b>2469</b>	
15	1	Ignition coil	<b>5682</b>	Includes fig. 15
30	2	Spark plug cap	<b>5826</b>	
31	2	Spark plug	<b>5668</b>	Do not mix spark plug types
32	1	Voltage Regulator	<b>5338</b>	
33	1	Magnet Support	<b>5724</b>	
34	1	Spark plug lead, short	<b>5666</b>	Wire only; does not include fig. 30
35	1	Coil spray guard	<b>6683</b>	
36	1	Spark plug lead, long	<b>5665</b>	Wire only; does not include fig. 30
-	-	Spark Plug lead set	<b>5661</b>	Includes fig. 30, 34, 36

## 2-Cylinder Fuel Injection Electrical System

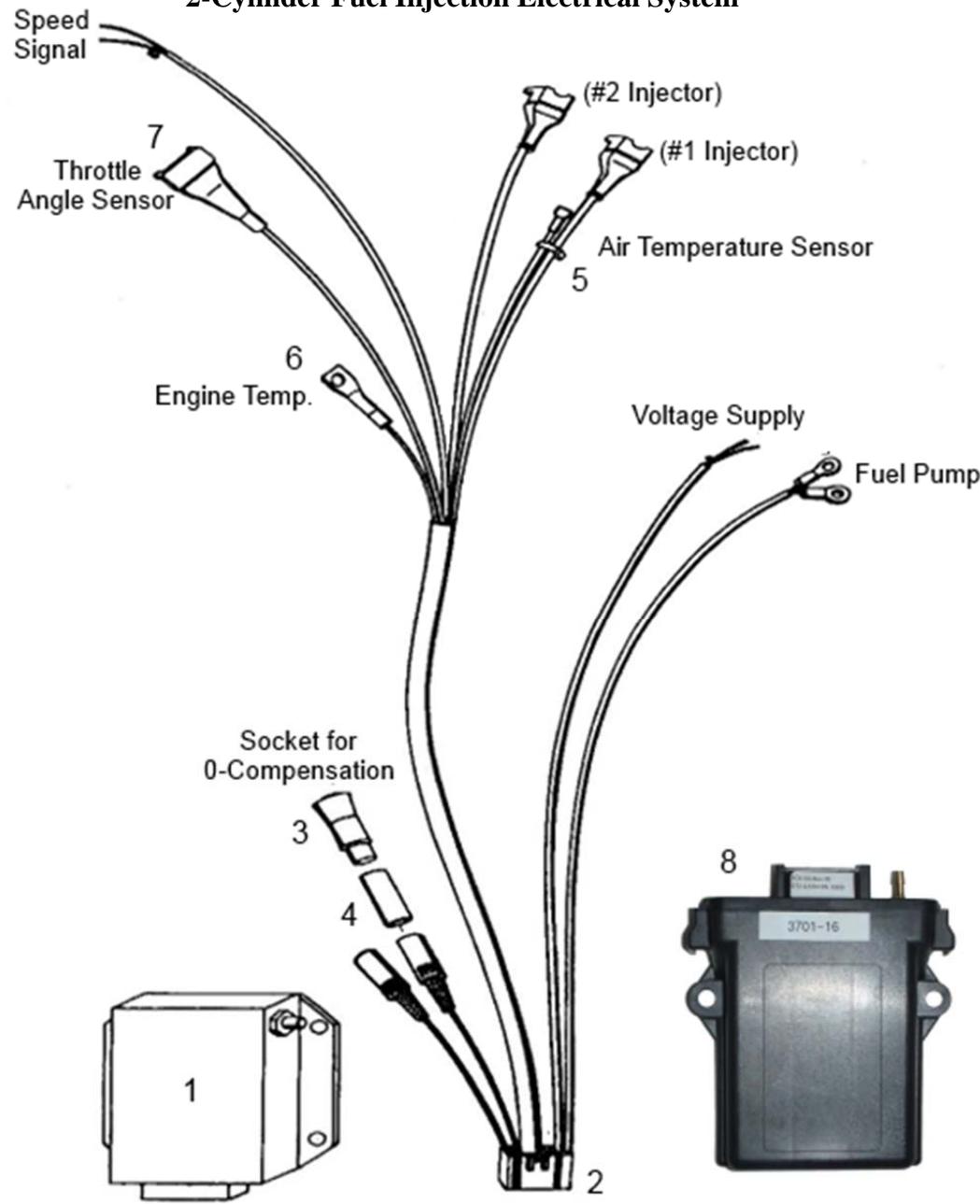


Fig.No.	Qty	Description	Neoteric Part #	Note
1	1	Red Computer Box	<b>5328</b>	Used on Early HoverTrek Models
2	1	Cable harness, Red	<b>6235</b>	Harness for Red Computer Box
2	1	Cable harness, Black	<b>6237</b>	Harness for Black Computer Box
3	1	0-compensation plug	<b>7205</b>	Used when optional manual enrichment device not used -
4	1	Shrink tube	<b>3192</b>	Place on plug with 3 wires (cable colors red, blue, black) 60 denotes length in mm
5	1	Air Temp Sensor	<b>7525</b>	
6	1	Engine Temp Sensor	<b>7526</b>	Attached to Cylinder Head
7	1	Throttle Pos. Sensor	<b>7567</b>	
8	1	Black Computer Box	<b>6382</b>	Used on Current HoverTrek Models

## Hirth HT4 Air Box Assembly

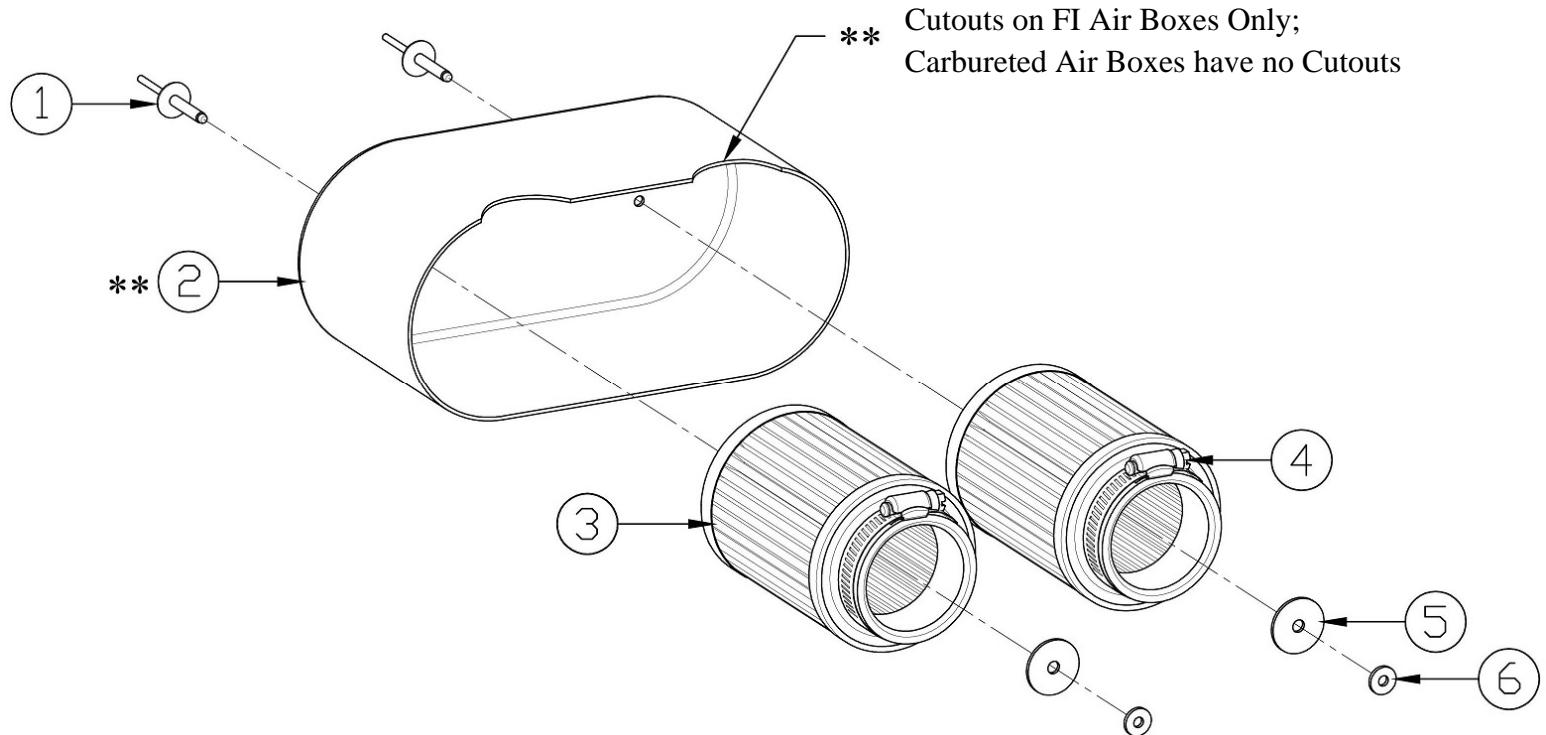


Fig. No.	Qty	Designation	Neoteric Part #	Remark
1	2	Rivet	<b>2156</b>	
2	1	Fiberglass Air Box, Carbureted	<b>5584</b>	
2	1	Fiberglass Air Box, FI	<b>7764</b>	
3	2	Air Filter	<b>6622</b>	Includes item 4
4	2	Hose Clamp	-	
5	2	Large Washer	<b>2516</b>	
6	2	Small Washer	<b>2352</b>	
-	-	Air Box Assembly, Carbureted	<b>5583</b>	Includes item 1 - 6 as shown above
-	-	Air Box Assembly, FI	<b>7765</b>	Includes item 1 - 6 as shown above

Hirth Fuel System

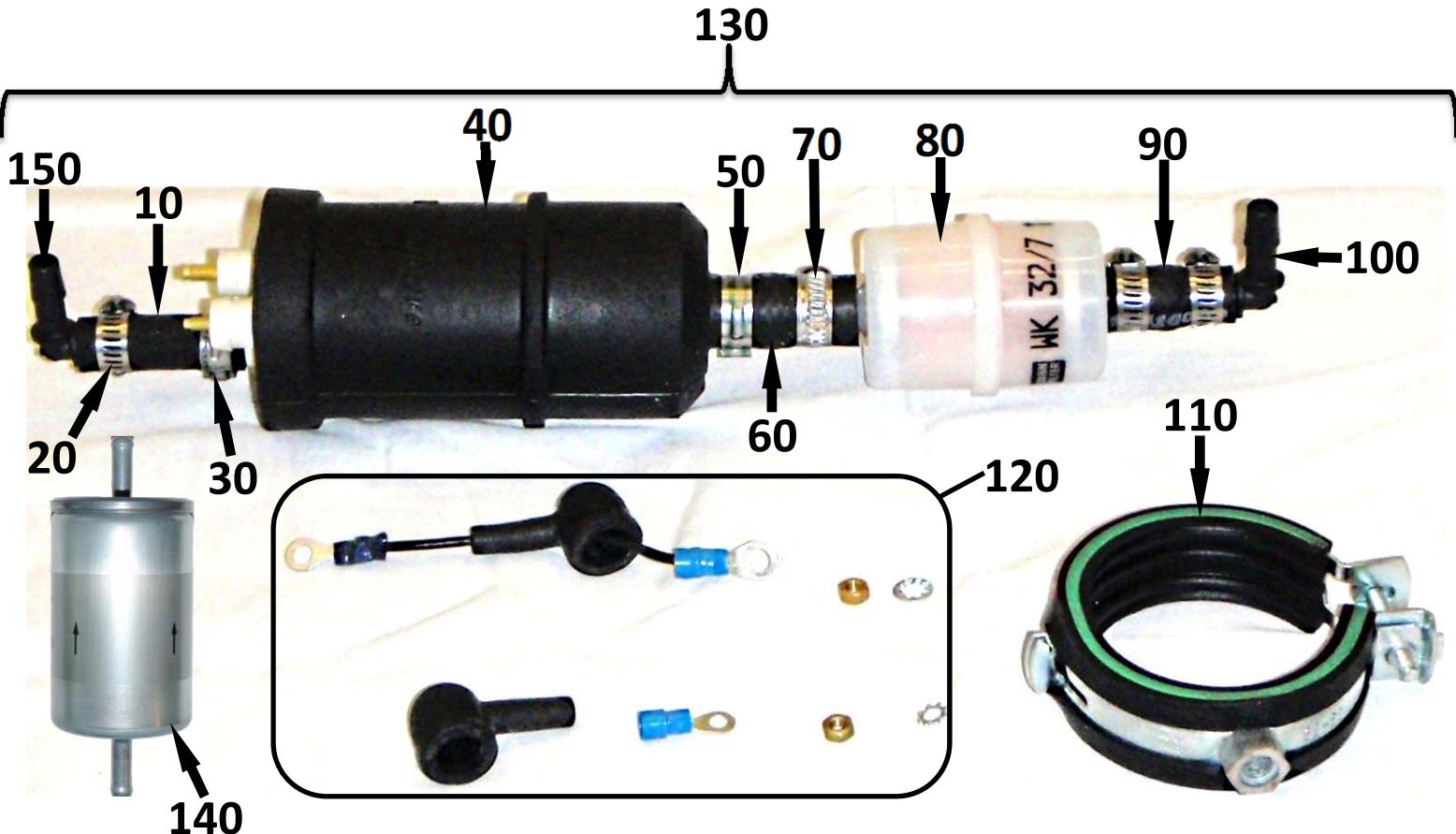
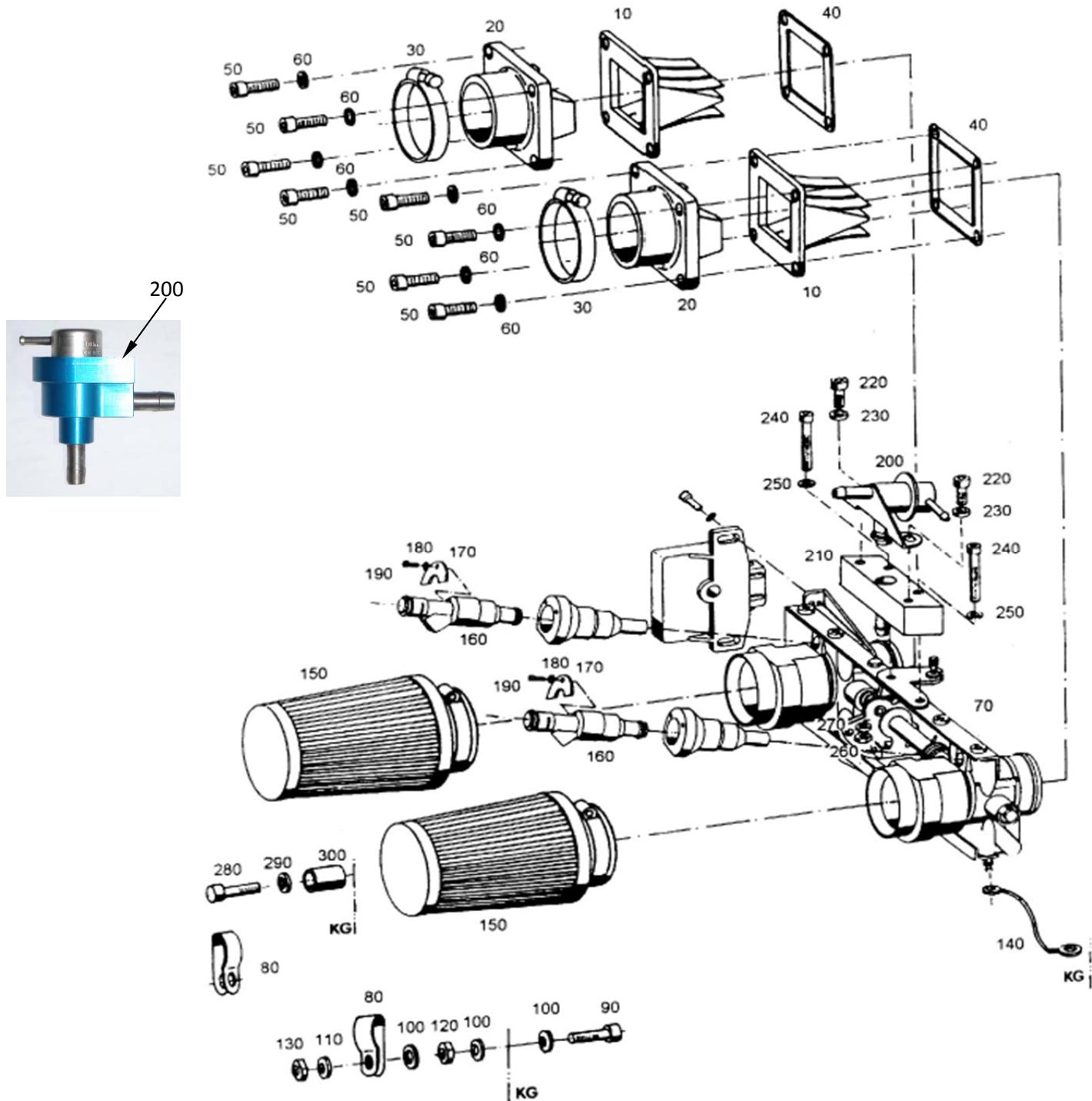


Fig. No.	Qty.	Description	Neoteric Part #	Remark /Notes
10	1	Fuel Line	6335	
20	3	Screw/Band Hose Clamp	2203	
30	1	Pinch Hose Clamp, Sm	5993	
40	1	Electric Fuel Pump	6414	
50	1	Pinch Hose Clamp, Lg	5986	
60	1	Fuel Line	6334	
70	1	Gapless Hose Clamp	6943	
80	1	Fuel Filter	5372	
90	3"	Fuel Line	3193	
100	1	Large Elbow	2674	
110	1	Fuel Pump Holder	6336	
120	1	Fuel Pump Connection Kit	6628	
130	-	Fuel Pump Assy	6666	Includes Fig No. 10 - 120
140	1	Micro Fuel Filter	5373	
150	1	Small Elbow	2438	

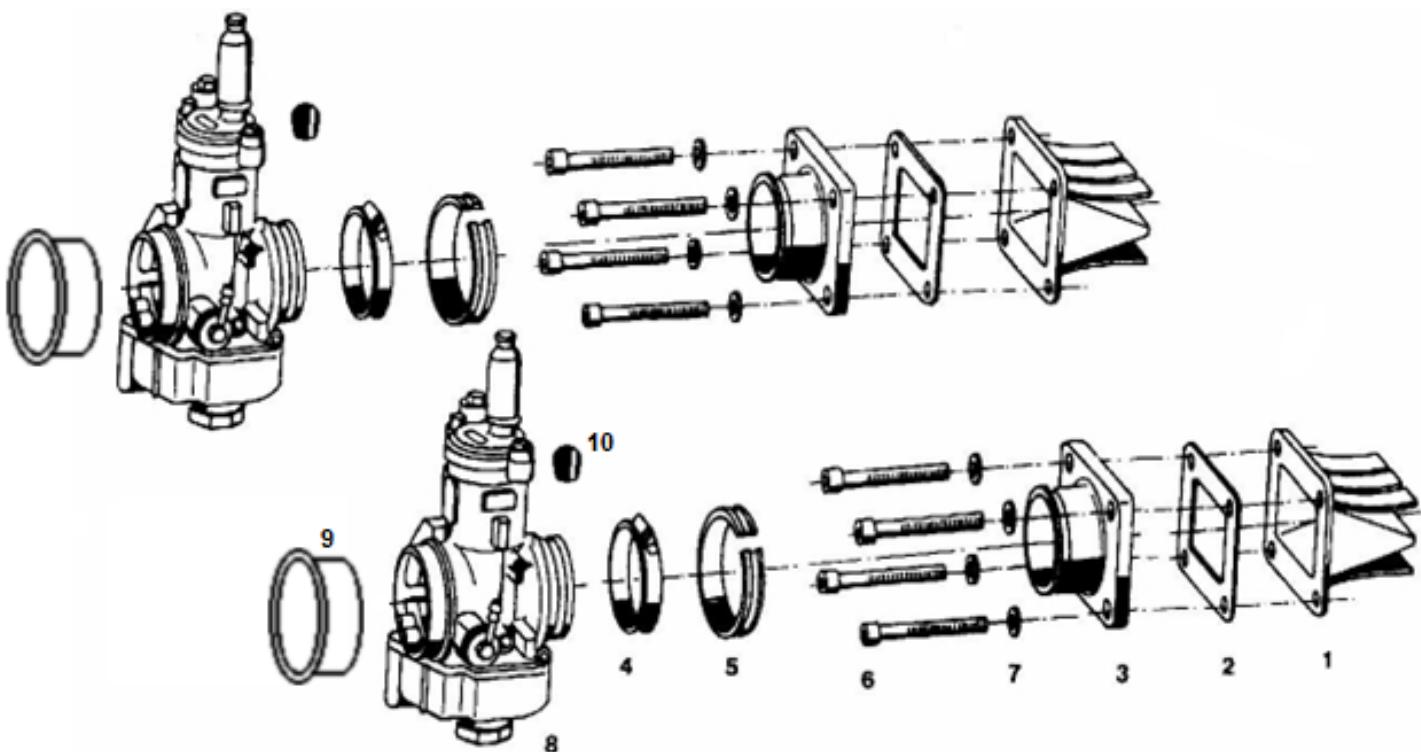
## Fuel Injection /Fuel mixture 3203



# Hirth 65HP Fuel Injection / Fuel mixture

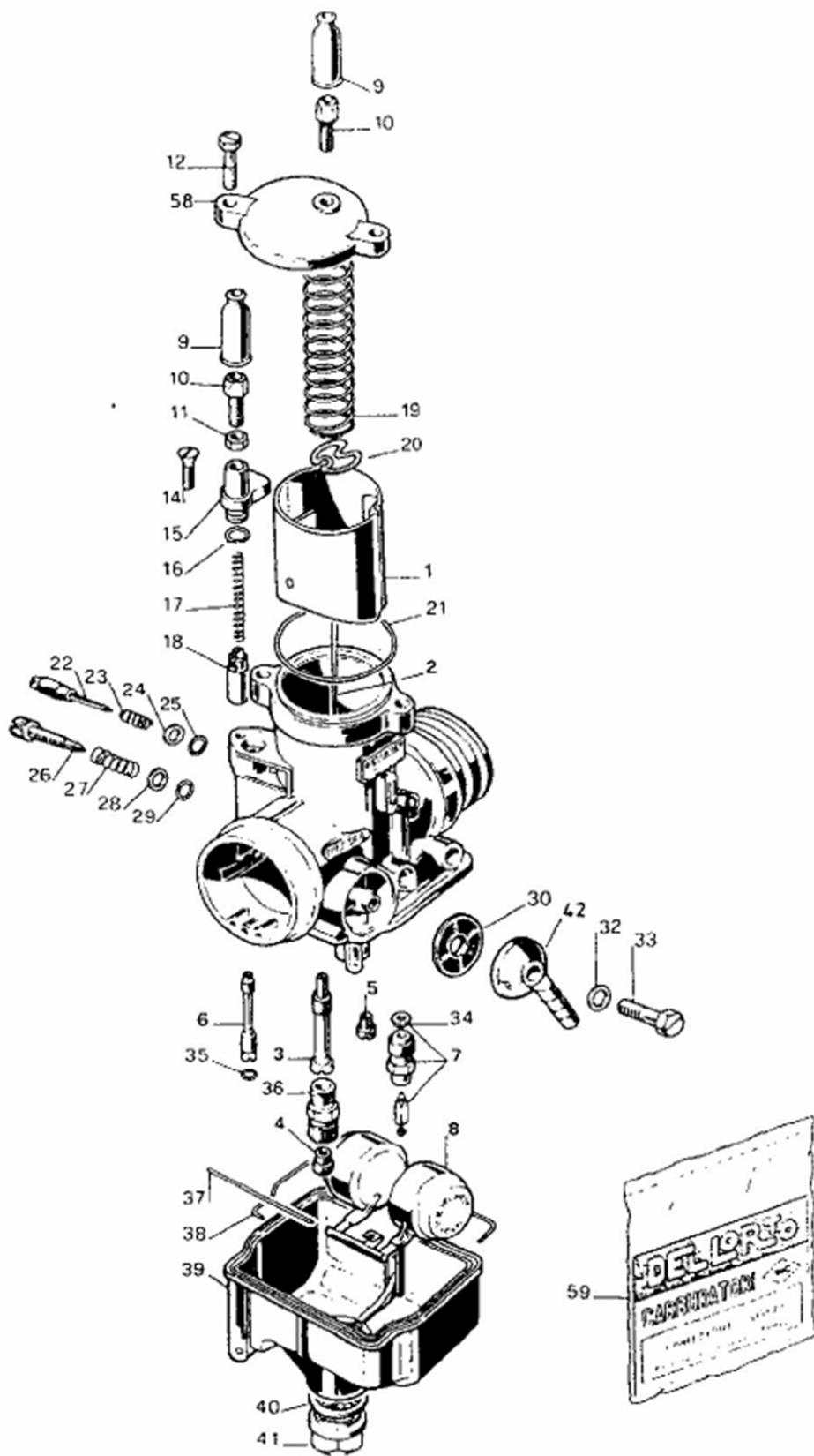
<b>Fig. No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part #</b>	<b>Remark / Notes</b>
10	2	Reed valve	<b>7203</b>	
20	2	Intake manifold	<b>6568</b>	
30	2	Hose clamp	<b>9008</b>	
40	2	Gasket	<b>5463</b>	
50	8	Cylinder screw	<b>2292</b>	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb)
60	8	Washer	<b>6916</b>	
70	1	Throttle manifold	<b>5594</b>	
80	2	Clamp	<b>6929</b>	
90	1	Cylinder screw	<b>6901</b>	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb)
100	3	Washer	<b>6916</b>	
110	1	Washer	<b>5996</b>	
120	1	Hexagon head nut	<b>9009</b>	
130	1	Hexagon head nut, self.	<b>5572</b>	
140	1	Ground cable	<b>6454</b>	
150	2	Air filter	<b>6622</b>	
160	2	Fuel Injector, Old Style	<b>6904</b>	*Used up to May-2011 (Engine #902754 & Lower)
160	-	Fuel Injector, New Style	<b>6903</b>	Currently used, from May-2011 onward (Engine #902754 & Higher)
170	2	Injector Holding plate	<b>9010</b>	
180	2	Washer	<b>9011</b>	
190	2	Cylinder screw	<b>9012</b>	Loctite 243
200	-	Pressure regulator, Old Style	<b>7188</b>	Shown in illustration; *Used up to May-2011 (Engine #902754 & Lower)
200	1	Pressure regulator, New Style	<b>7932</b>	Currently used, from May-2011 onward (Engine #902754 & Higher)
200	-	Pressure regulator, Replacement	<b>7279</b>	Compatible with both old & new styles
210	1	Pressure regulator holder, complete	<b>9013</b>	
220	2	Cylinder screw	<b>7189</b>	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb)
230	2	Washer	<b>6916</b>	
240	2	Cylinder screw	<b>9014</b>	Loctite 243
250	2	Washer	<b>6936</b>	
260	2	Hexagon head nut	<b>9015</b>	
270	2	Washer	<b>9016</b>	
280	1	Cylinder screw	<b>9017</b>	
290	1	Washer	<b>6936</b>	
300	1	Bushing	<b>6935</b>	

**65HP Hirth Carburetor / Fuel mixture  
(3203)**



<b>Fig No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part #</b>	<b>Remark&gt;Note</b>
1	2	Reed valve	7203	
2	2	Gasket	5463	
3	2	Intake manifold/carb flange	6568	
4	2	Hose clamp	9018	
5	8	Rubber	9019	
6	8	Cylinder screw	7183	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb) Loctite 243
7	2	Washer	6916	
8	2	Dellorto Carburetor	5355	See Form 17754 / 17755 for Carb Parts
9	2	Protective stopper	7207	
10		Hirth Rubber Socket	7208	

## Carburetor (Dellorto) PHBE 34



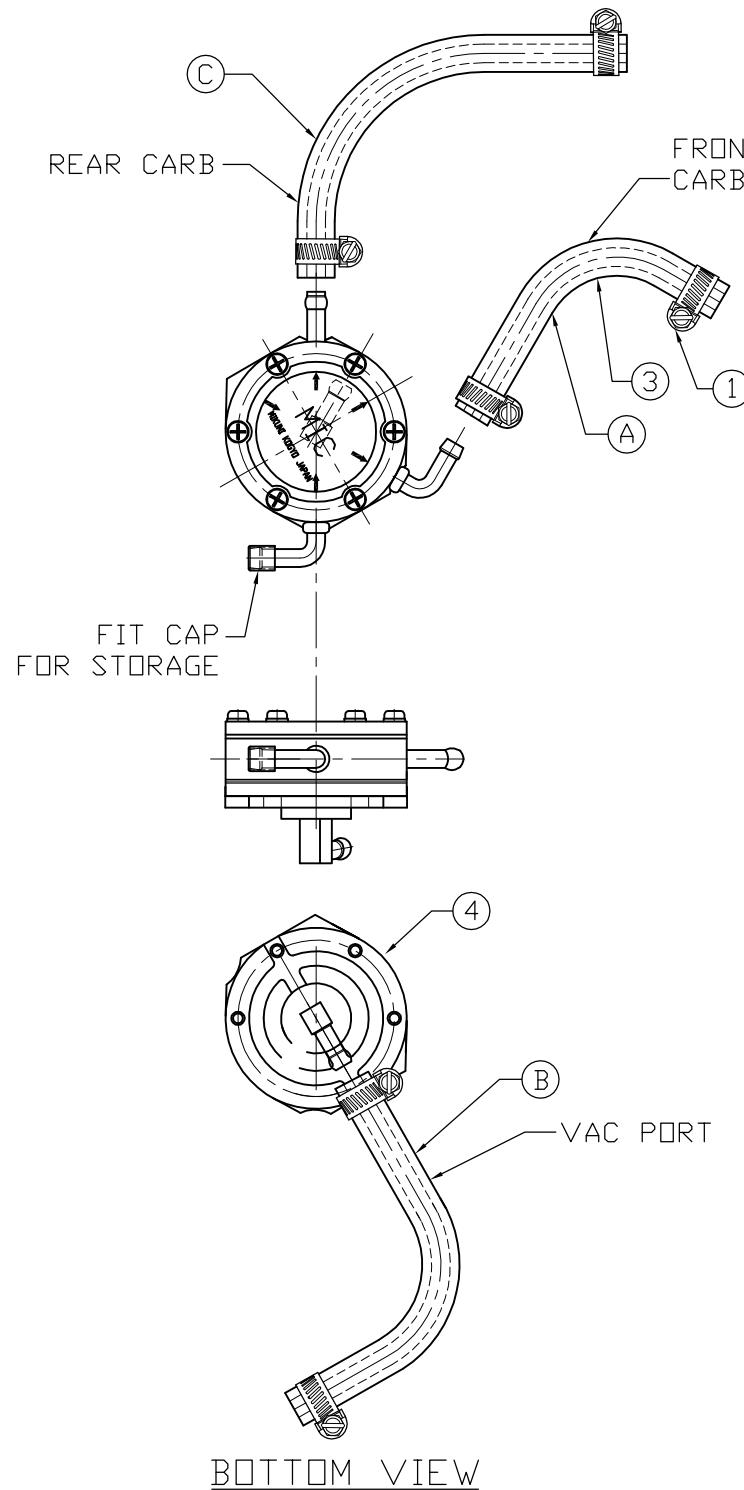
# Carburetor (Dellorto) F 33 A (PHBE 34 BD 6832)

<b>Fig. No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part #</b>	<b>Remark&gt;Note</b>
1	1	Throttle slide	<b>9022</b>	
2	1	Jet needle, K36	<b>6563</b>	
3	1	Needle jet	-	
4	1	Main jet	-	
5	1	Idle jet, 65	<b>9023</b>	
6	1	Cold start / Choke jet	<b>7788</b>	
7	1	Float valve	<b>9024</b>	
8	1	Float	<b>6909</b>	
9	2	Rubber cap	<b>7828</b>	*Must Purchase 7828 Kit
10	1	Choke Cable Adjustment	<b>7828</b>	*Must Purchase 7828 Kit
11	1	Choke Cable Adjustment Locknut	<b>7828</b>	*Must Purchase 7828 Kit
12	2	Top Cover Screw	<b>9027</b>	
14	1	Choke Support Screw	<b>9028</b>	*Must Purchase 7828 Kit
15	1	Choke Support Casting	<b>9029</b>	*Must Purchase 7828 Kit
16	1	Choke Support O-ring	<b>7828</b>	Included in Pos. 59
17	1	Choke Valve Spring	<b>9030</b>	*Must Purchase 7828 Kit
18	1	Choke valve	<b>7828</b>	*Must Purchase 7828 Kit
19	1	Throttle Slide Spring	<b>9025</b>	
20	1	Bracket plate	<b>6973</b>	
21	1	Top Cover O-Ring	<b>9026</b>	Included in Pos. 59
22	1	Mixture Adjustment Screw	<b>9031</b>	
23	1	Mixture Adjustment Spring	<b>9032</b>	
24	1	Mixture Adjustment Washer	<b>9033</b>	
25	1	Mixture Adjustment O-ring	-	Included in pos. 59
26	1	Idle Adjustment Screw	<b>9034</b>	
27	1	Idle Adjustment Spring	<b>9035</b>	
28	1	Idle Adjustment Washer	<b>9036</b>	
29	1	Idle Adjustment O-ring	-	Included in Pos. 59
30	1	Fuel Inlet Filter	<b>9037</b>	
32	1	Fuel Inlet O-ring	-	Included in Pos. 59
33	1	Fuel Inlet Screw	<b>9038</b>	
34	1	Needle Valve Gasket Washer	-	Included in Pos. 59
35	1	Cold Start / Choke O-ring	-	Included in Pos. 59
36	1	Main jet holding screw	<b>9039</b>	
37	1	Float Pivot Pin	<b>9040</b>	
38	1	Sealing for float chamber	-	Included in Pos. 59
39	1	Float Bowl	<b>9041</b>	
40	1	Float Bowl Gasket Washer	-	Included in Pos. 59
40	1	Float Bowl Gasket O-Ring	<b>2739</b>	Optional Replacement For Washer
41	1	Float Bowl Nut	<b>9042</b>	
42	1	Fuel Inlet Nipple	<b>6114</b>	
58	1	Carburetor Top Cover	<b>9043</b>	
59	1	Gasket set	<b>5468</b>	Includes Pos. 16,21,25,29,32,34,35,38,40

**65HP (PHBE) Dellorto Carb Jets**  
**Parts List**

Qty.	Description	Neoteric Part #	Remark / Note
1	Main Jet, 155	<b>5443</b>	
	Main Jet, 142	<b>5444</b>	
	Main Jet, 145	<b>5467</b>	
	Main Jet, 160	<b>5863</b>	
	Main Jet, 162	<b>5864</b>	
	Main Jet, 158	<b>6193</b>	
1	Idle Jet, 65	<b>9023</b>	
1	Cold Start / Choke Jet, 90	<b>7788</b>	
1	Atomizer / Needle Jet, AB/266	<b>5726</b>	
	Atomizer / Needle Jet, AB/262	<b>5760</b>	
	Atomizer / Needle Jet, AB/268	<b>6194</b>	
1	Jet Needle, K36	<b>6563</b>	

BILL OF MATERIAL			
REF.	PART #	DESCRIPTION	QTY.
1	2203	HOSE CLAMP, SS	6
2	2371	WIRE TIE	1
3	3000	FUEL HOSE	33.63
4	5465	FUEL PUMP	1



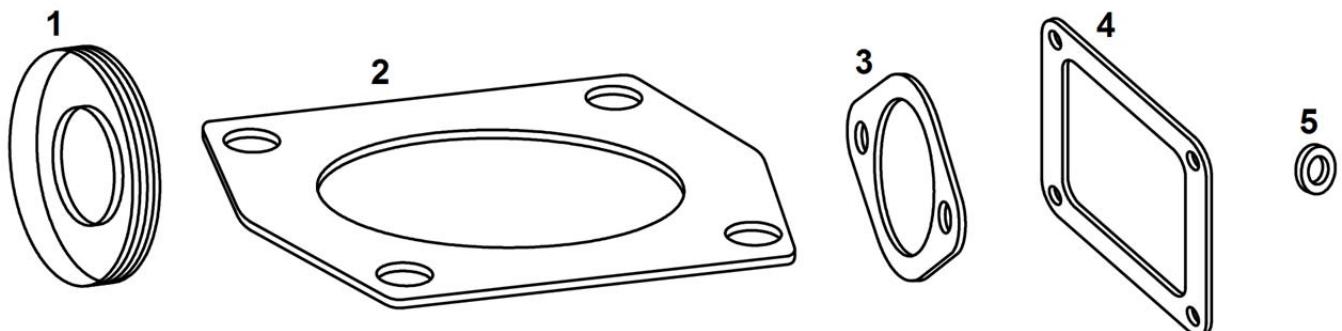
ALL DIMENSIONS IN IN AND [mm] TOLERANCE UNLESS OTHERWISE SPECIFIED:			
$X.XX \pm 0.063^{\circ}$ [0.160]			
USED ON:	CHECKED:		
EW3 12-JAN-2015	CJ173 12-JAN-2015		
SCALE:			
PAGE:	1 OF 1	WEIGHT:	
DRAWN: CJ POEHLIN		NAME: 65HP DELLORTO FUEL PUMP ASSY.	
DATE: 1 FEB, 2013		NUMBER: 16644	REV. 2

Neoteric Hovercraft Inc.

1649 TIPPECANOE STREET  
TERRE HAUTE, INDIANA U.S.A. 47807-2394  
TELEPHONE (812) 234-1120 FAX (812) 234-3217

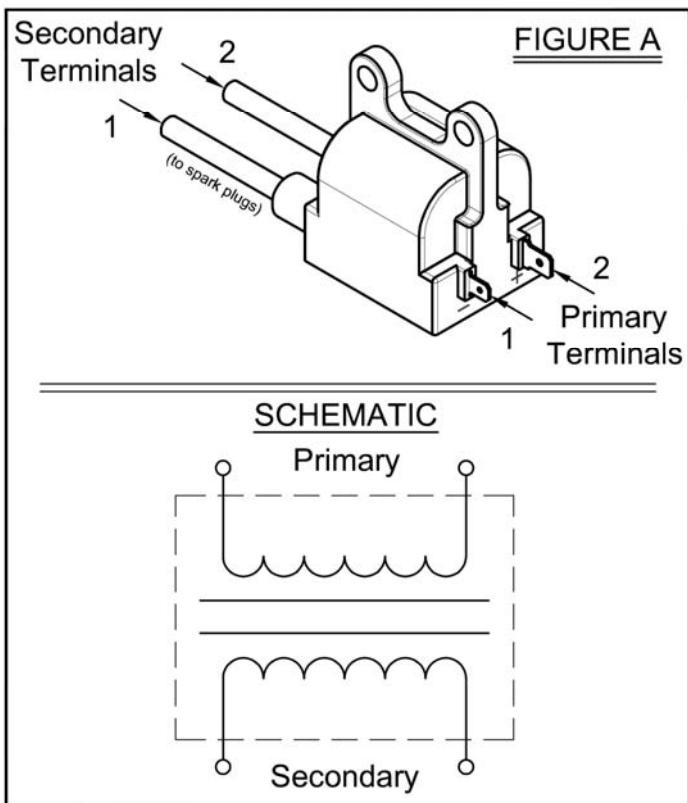
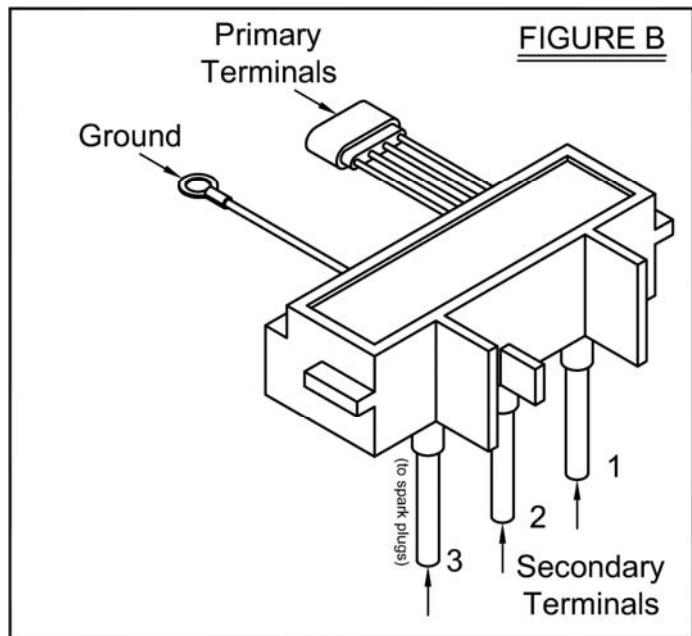
CUT SCHEDULE	
REF.	LENGTH
A	7.5
B	5.75
C	15.13

**65HP Gasket Set  
(3203)**

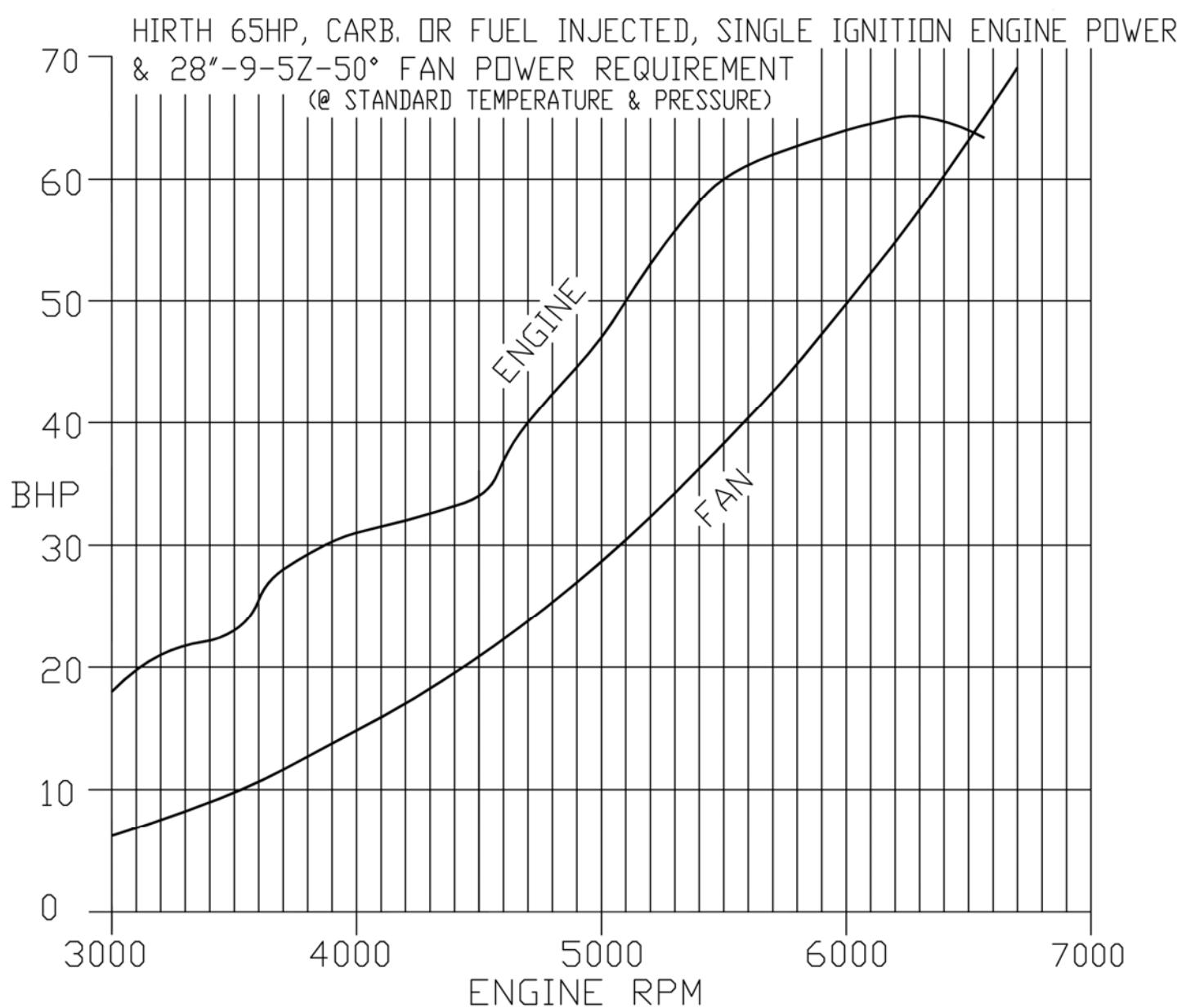


<b>Fig. No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Neoteric Part #</b>	<b>Remark / Notes</b>
-	1	65HP Gasket Set	<b>7988</b>	Includes Fig 1, 2, 3, 4, 5
1	2	Crankshaft Seal	<b>5453</b>	
2	2	Cylinder Base Gasket	<b>5455</b>	
3	2	Exhaust Outlet Gasket	<b>5245</b>	
4	1	Single Carb Intake Gasket	<b>5463</b>	
5	2	Vacuum Nipple Gasket Washer	<b>5629</b>	

HIRTH ELECTRICAL COMPONENT RESISTANCE VALUES					
Volt Meter Terminal 1 (Red Lead)	Volt Meter Terminal 2 (Black Lead)	Value	Unit	Part	Notes
Yellow Wire	Yellow Wire	0.080	Ohm	5591 - 55/65Hp Stator Coil (Magneto)	
Yellow Wire	Mount Plate	450000000 - 550000000	Ohm		
Primary 1	Primary 2	0.351 - 0.429	Ohm	5682 - 55/65Hp Ignition Coil	See Figure "A"
Primary	Secondary	450000000 - 550000000	Ohm		
Secondary 1	Secondary 2	2699.1 - 3298.9	Ohm		
Black & Green Wire	Black & White Wire	0.396 - 0.484	Ohm	6097 - 100Hp Ignition Coil	See Figure "B"
Yellow & Brown Wire	Black & White Wire	0.405 - 0.495	Ohm		
Black & Blue Wire	Black & White Wire	0.387 - 0.473	Ohm		
Ground	Black & White Wire	450000000 - 550000000	Ohm		
Secondary 1	Ground	1385.1 - 1747.9	Ohm		
Secondary 2	Ground	1386 - 1694	Ohm		
Secondary 3	Ground	1386 - 1694	Ohm		
Yellow Wire	Yellow Wire	0.100	Ohm	6564 - 100Hp Stator Coil (Magneto)	
Black	Red	2.950	Volts (DC)	5338 - Hirth Voltage Regulator	* Must have a multi-meter with a diode test to diagnose voltage regulator
Red	Black	> 5.000	Volts (DC)		
Yellow	Yellow	2.300	Volts (DC)		



### 65HP Hirth Engine/Fan Power Requirement Graph



## 65HP Fan Altitude Performance Graph

