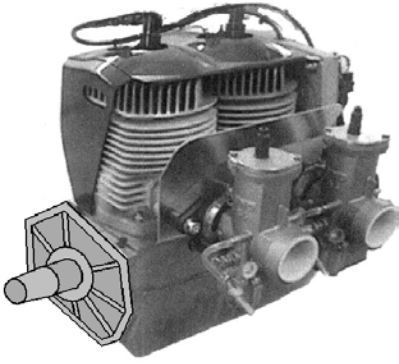




HIRTH 3203 Carbureted - 65 HP



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 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 superheated 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.

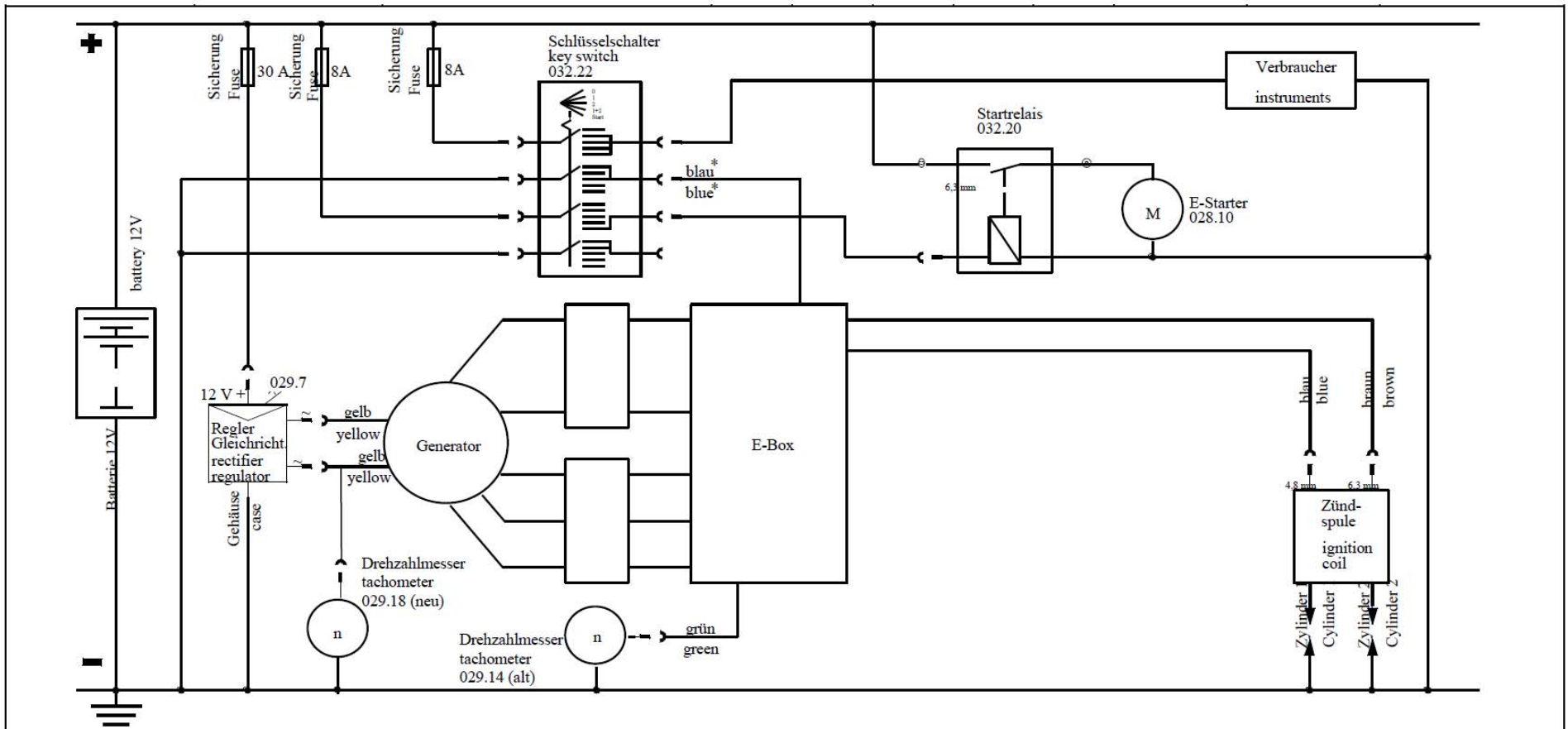
2706 - 65Hp engine shown with fan cooling

Technical Data:

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

*Optional Plugs: NGK BR8HS
Champion RL86C or #830

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	0.020-0.024
No. of Carburetors	Two
Carburetor ID #	Dellorto PHBE 34 BD 8
Main Jet	160 : 155 & 158 Available
Idle Jet	40
Mixture Adjustment Screw	3/4 Turn Out
Jet Needle	K 35
Needle Jet	AB 268
Needle Position	1
Cold Start/Choke Jet	90
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*




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

General size of line wire: 1,5 mm²

Size of line from/to E-Starter: 16 mm²

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

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

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

65HP Cylinder Single Ignition

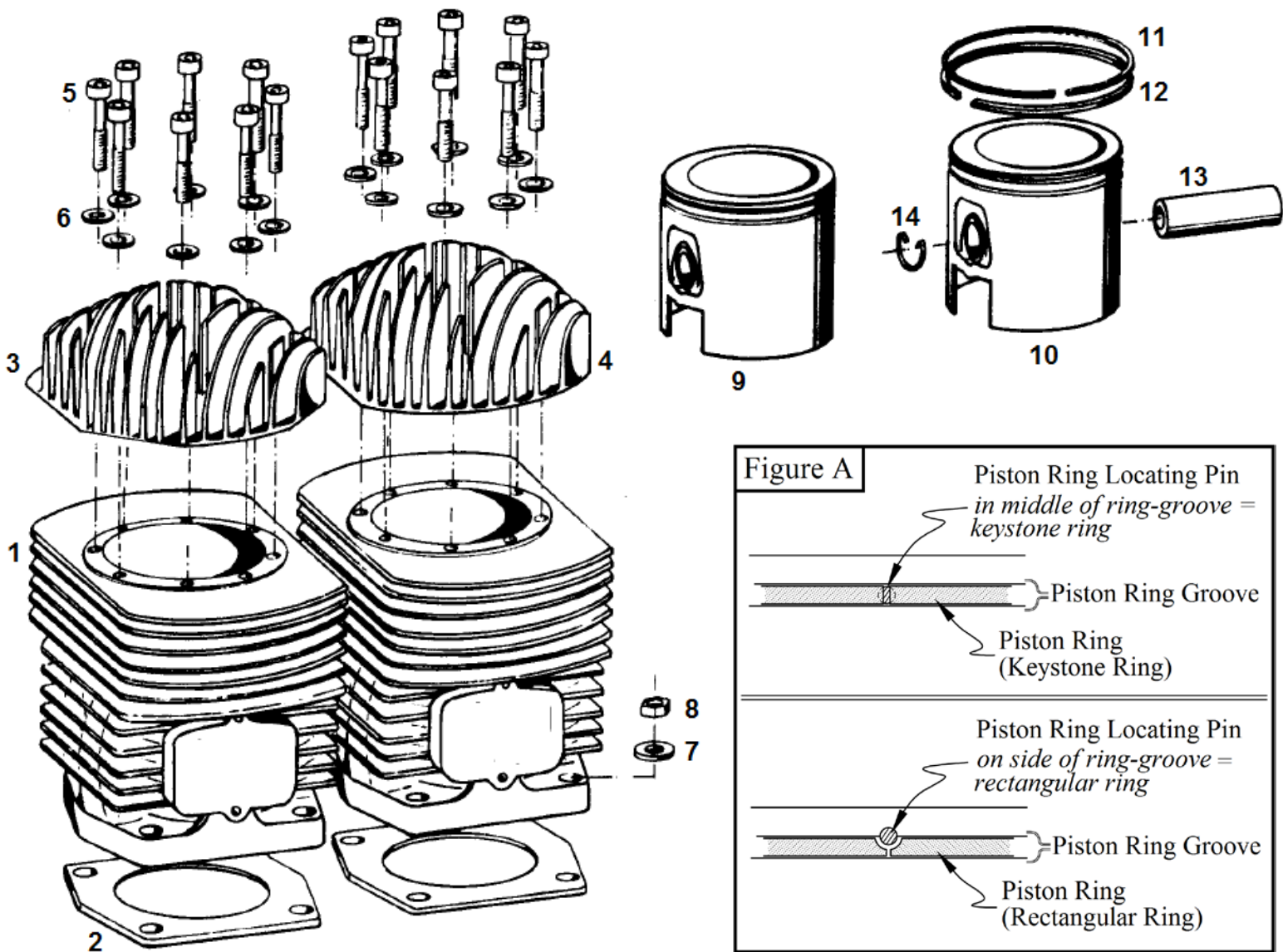


Fig. No.	Qty.	Description	Neoteric Part #	Remark / Note
1	2	Cylinder	6099	
2	2	Cylinder base gasket	5455	See Form 17368 for Gasket set
3	1	Rear Cylinder head	5457	
4	1	Front Cylinder head	5458	
5	16	Cylinder screw	6911	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb)
6	16	Washer	5994	
7	8	Washer	6234	
8	8	Hexagon head nut	6233	Torque = 23 - 26 Nm (17 - 19.2 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 Figure "A"
12	-	Rectangular Piston-Ring	5451	
13		Wrist Pin	5972	
14		Retaining ring (circlip)	6301	

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

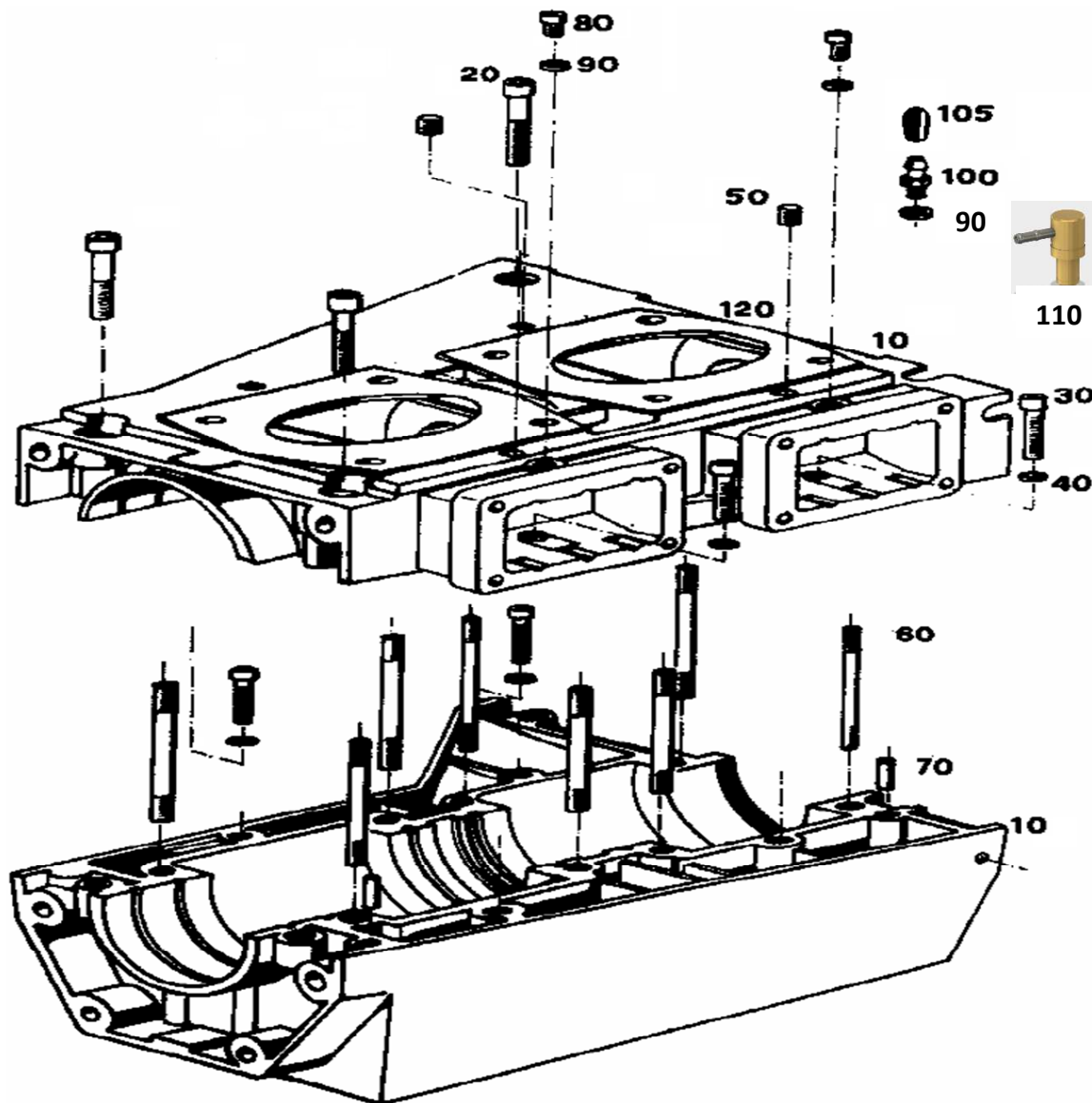


Fig. No.	Qty.	Description	Neoteric Part #	Remark / Notes
10	1	Crankcase, complete	7164	Included Figures 60 - 70
20	3	Cylinder screw	7937	Torque = 23 - 25 Nm [17 - 18.4 ft-lb]
30	4	Cylinder screw	2289	Torque = 9 - 11 Nm [6.6 - 8.1 ft-lb]
40	4	Washer	6916	
50	4	Threaded Pin Grub Screw	9003	Loctite 243
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

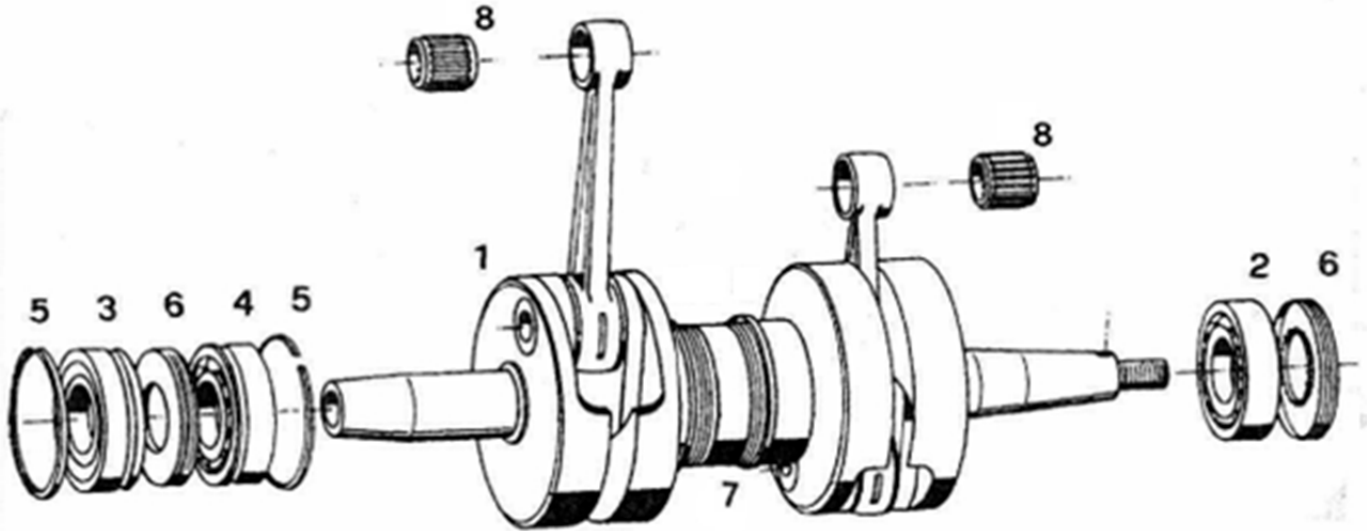


Fig. No.	Qty.	Description	Neoteric Part #	Remark / Notes
1	1	Crankshaft, complete	5449	Includes items 2 - 7
2	1	Deep groove ball bearing	5460	
3	1	Deep groove ball bearing	5461	
4	1	Deep groove ball bearing	5462	
5	2	Circlip	7912	
6	2	Shaft sealing ring	5453	
7	1	Space ring	7913	
8	2	Needle Bearing, Blue dot (#1)	7909	* Connecting Rods are Color-Coded with a Paint Dot on the Piston end. 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) Blue (#1) is the smallest and Green (#5) is the largest. Connecting rods with a Red (#3) dot are most common. If the paint dot is missing and no number code can be found, all bearings must be tried for the best fit.
		Needle Bearing, Yellow dot (#2)	6082	
		Needle Bearing, Red dot (#3)	6083	
		Needle Bearing, White dot (#4)	5464	
		Needle Bearing, Green dot (#5)	7910	

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

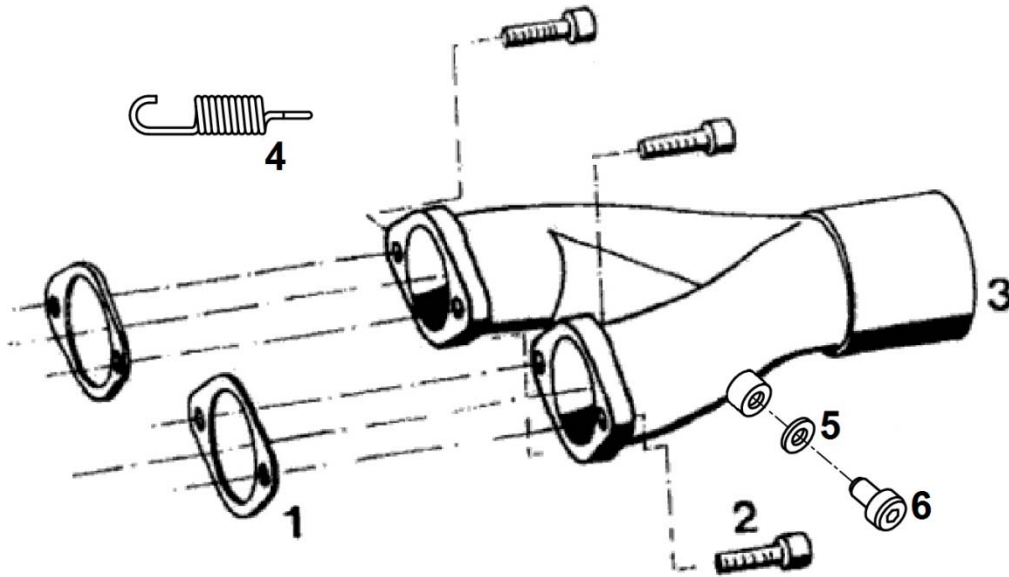
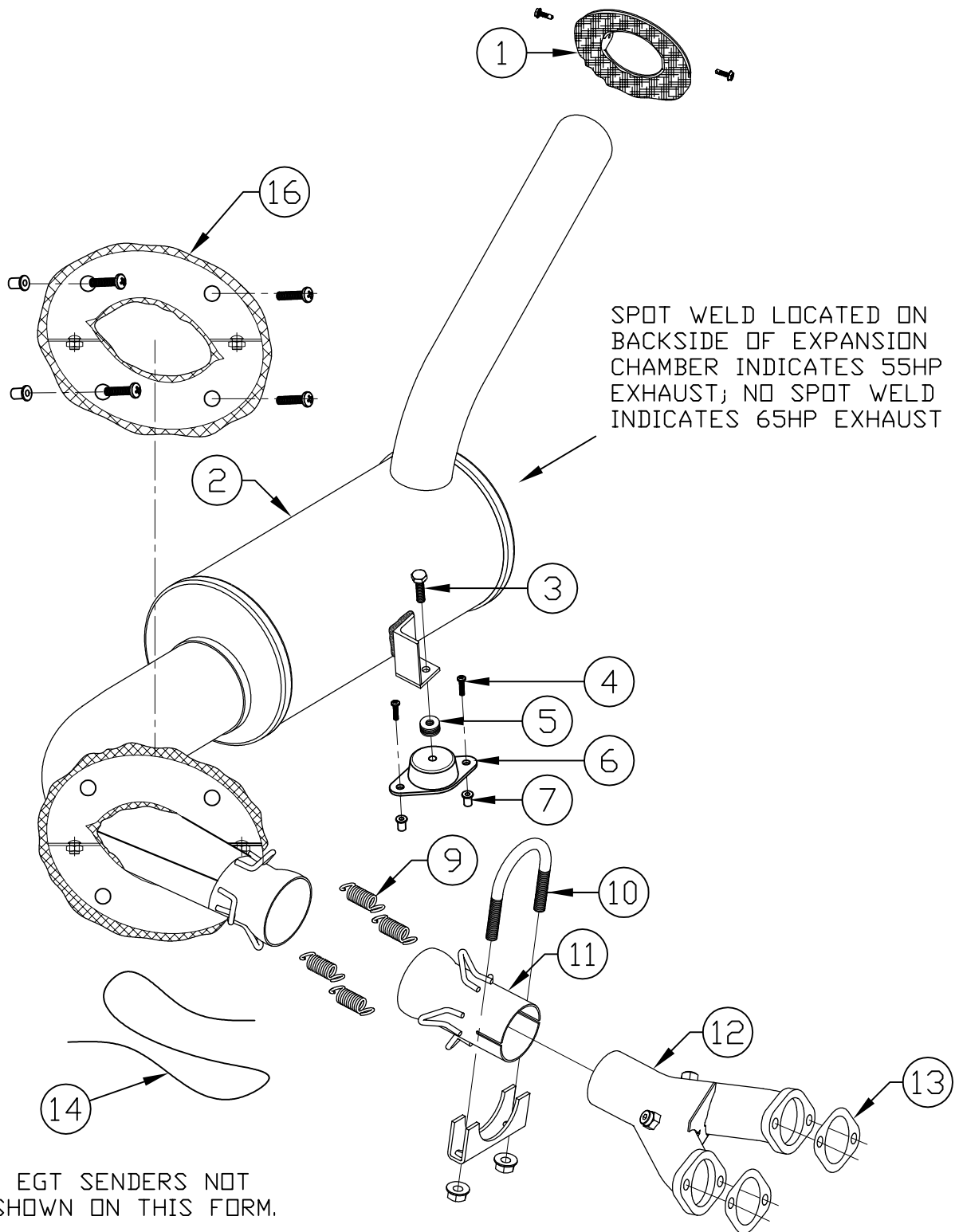
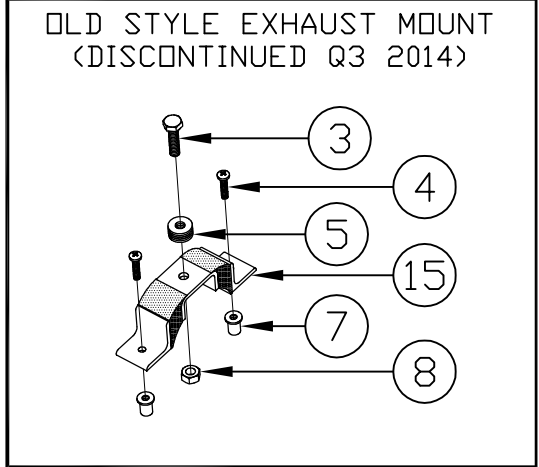


Fig. No.	Qty.	Designation	Neoteric Part #	Remark / Notes
1	2	Exhaust gasket	5245	
2	4	Cylinder screw	6932	Torque = 23 - 28 Nm (17 - 20.1 ft-lb)
3	1	Exhaust manifold	5548	Prepared for temperature meas.
4	4	Exhaust Spring	5421	
5	2	Copper Washer	7077	
6	2	M8x1x10 SHCS	6934	EGT Plugs; used when no EGT is installed



EGT SENDERS NOT SHOWN ON THIS FORM.

BILL OF MATERIAL		
REF.	PART #	DESCRIPTION
1	5408	EXHAUST, OUTLET FLANGE ASSY
2	5410	65HP EXHAUST
2	5479	55HP EXHAUST
3	2284	BOLT
4	2437	SCREW
5	2070	WASHER
6	9083	EXHAUST VIBRATION MOUNT
7	2551	WELL NUT
8	2451	NUT
9	5421	EXHAUST SPRING
10	5862	EXHAUST CLAMP
11	5546	55/65HP EXHAUST, STRAIGHT CONNECTOR
12	5548	65HP EXHAUST, Y-PIPE
12	5547	55HP EXHAUST, Y-PIPE
13	5245	55/65HP EXHAUST, HEADER GASKET
14	3023	SAFETY WIRE
15	5613	EXHAUST VIBRATION MOUNT (OLD STYLE)
16	9133	55/65HP BOLT ON EXTERNAL EXHAUST FLANGE ASSY



SIG. NO.	REVISION	DATE
CJ 4	ADDED NEW EXHAUST FLANGE ASSY	3 APR, 2015
CS 3	UPDATE TO NEW MOUNT	11 NOV, 2014
CS 2	UPDATE TO STD II	12 MAR, 2013
CP	REV DESCRIPTIONS	18 JAN, 2013

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

DRAWN:	J. BARGO	NAME:	55/65 HP HIRTH EXHAUST SYSTEM
DATE:	22 JUL, 2009	NUMBER:	17713
		REV.:	4

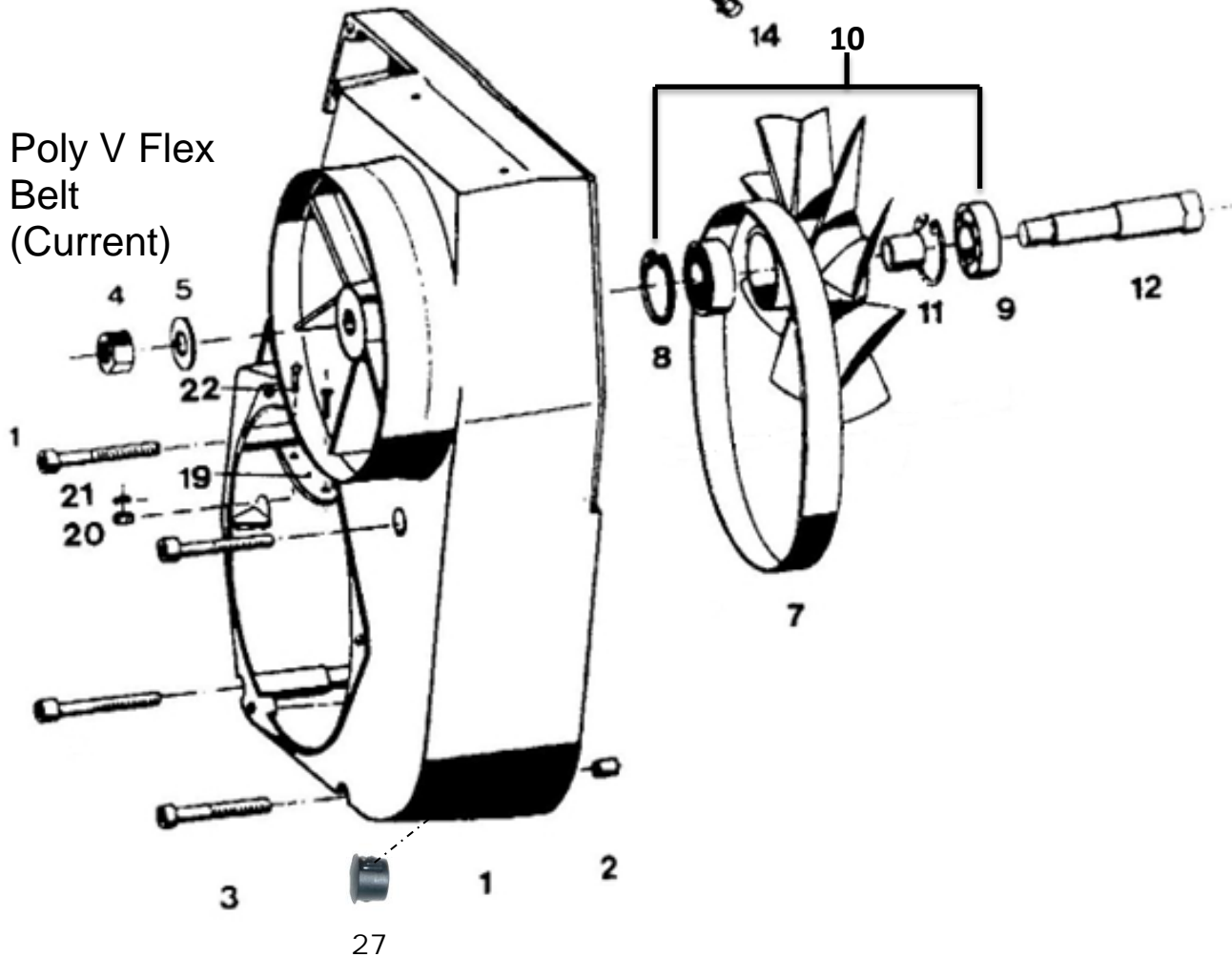
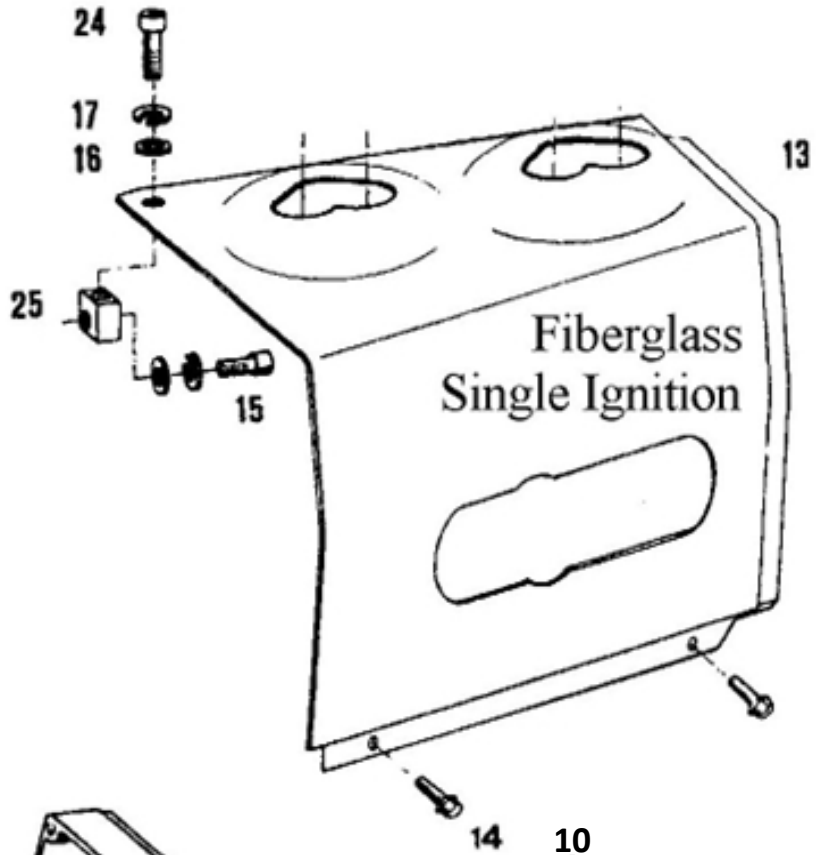
Fan cooling system 3203

* Flat Belt
Cooling Fan
(Old Style)

* Flat Belt
(Old Style)

Poly V Belt
Cooling Fan
(Current)

Poly V Flex
Belt
(Current)



NOTE:
If switching to poly V
belt, must change
sprocket as well.
Sprocket item #6 on
form 17282 below
Sprocket Part#6389

Fan cooling system 3203

Fig. No.	Qty.	Description	Neoteric Part No	Remark/Note
1	1	Fan housing, complete	9020	Includes Fig No. 4, 5, 6, 10*, 12, 19, 20, 21
2	3	Alignment sleeve	7939	
3	4	Cylinder screw	3258	Torque = 6-8 ft lb. (9.6-11 Nm)
4	1	Hexagon head nut	6855	Torque = 20 ft lb. (27-30 Nm)
5	1	Washer	6856	
7*	1	Flat belt	3407	*Used up to model year 2008 (Engine #901105 & Lower)
7	1	Poly V Flex belt	6390	Currently used, from 2008 onward (Engine #901106 & Higher)
8	2	Locking ring	7940	
9	2	Deep groove ball bearing	6887	
10*	1	Fan wheel Assy, Flat belt	3408 (5879 – modified)	Incl. Pos. 8, 9, 11 *Used up to model year 2008 (Engine #901105 & Lower)
10	1	Fan wheel Assy, Poly V	6391	Incl. Pos. 8, 9, 11 Currently used, from 2008 onward (Engine #901106 & Higher)
11	1	Bushing	7941	
12	1	Eccentric shaft	6857	
13-B	1	Air guide cowl - SI	5324	Single ignition
14	2	Thread screw	5997	
15	1	Cylinder screw	6901	Torque = 6-8 ft lb. (9.6-11 Nm)
16	2	Washer	6916	
17	2	Spring ring	5999	
19	1	Metal plate	6183	
20	2	Hexagon head nut	2694	
21	2	Washer	7942	
22	2	Screw	2693	
23-A	2	Rubber grommet		For dual ignition engines
23-B	2	Rubber grommet	9021	For single ignition engines
24	1	Cylinder screw	5998	Torque = 6-8 ft lb. (9.6-11 Nm)
25	1	Air guide mounting block	6928	
26	1	Sheet	5981	Not on Sketch
27	1	Hole Plug	2449	Covers Hole In Housing

**65HP Starting Device
(3203)**

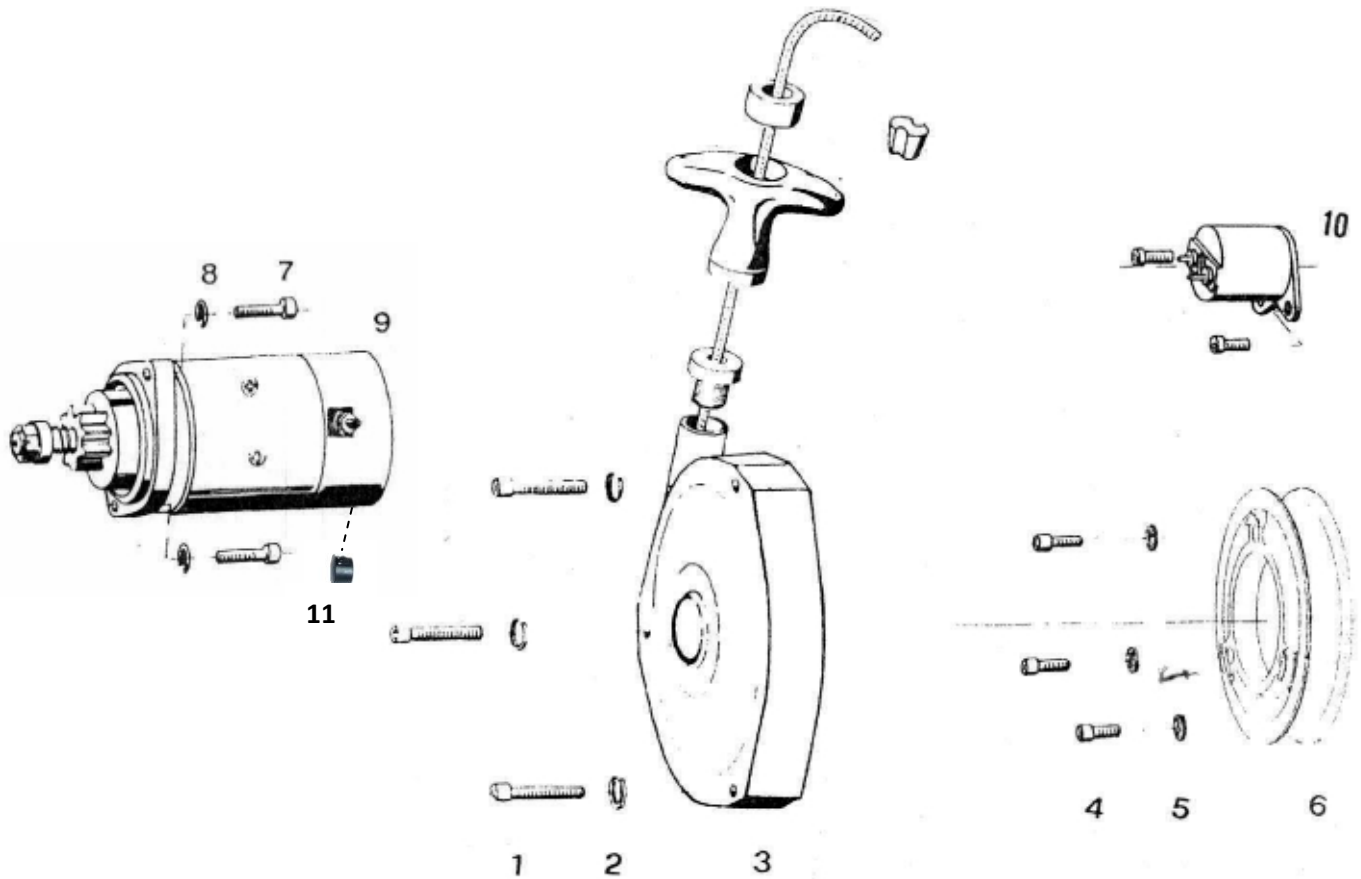


Fig. No.	Qty.	Description	Neoteric Part #	Remark/Note
1	3	Cylinder screw	6911	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb)
2	3	Spring ring	6940	
3	1	Starter, mounted	5267	
4	3	Cylinder screw	7944	Torque = 23 - 28 Nm (17 - 20.7 ft-lb)
5	3	Tab washer	5995	
6*		Driving dog with starter, Flat	6189	*Used up to model year 2008 (Engine #901105 & Lower)
6	1	Driving dog with starter, Poly-V	6389	Currently used, from 2008 onward (Engine #901106 & Higher)
7	2	Cylinder screw	2348	Torque = 23 - 28 Nm (17 - 20.7 ft-lb)
8	2	Tab washer	5995	
9	1	Starter	6982	Old Starter 5545
-	1	Alternative Starter	7563	Replacement for Customers
10	1	Starter Solenoid	5417	
11	1	Starter Hole Plug	9172	Used to plug drain hole in starter

55/65HP Ignition System

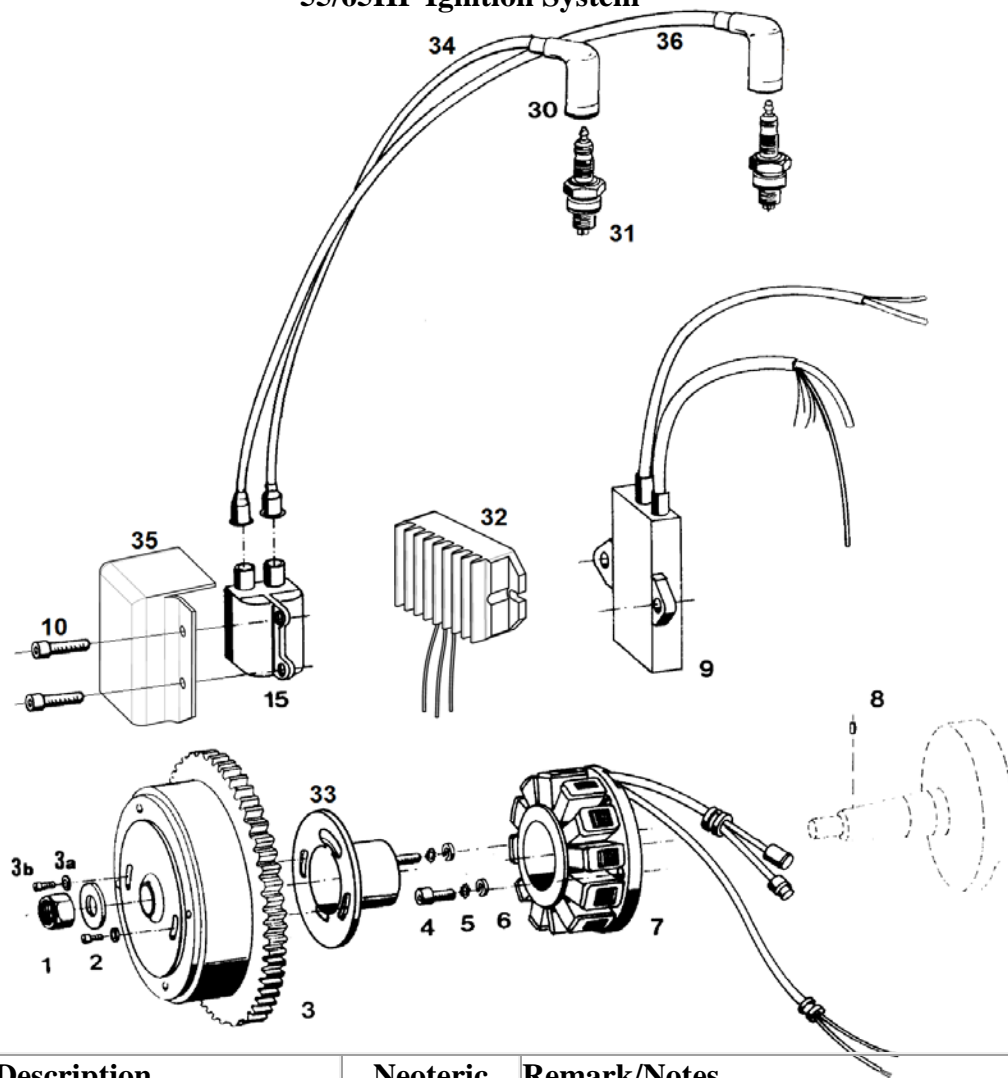


Fig. No.	Qty.	Description	Neoteric Part #	Remark/Notes
1	1	Hexagon head nut	6939	Torque = 140 - 150 Nm (103.3 - 110.6 ft-lb)
2	1	Washer	7196	
3	1	Flywheel with gear ring	7984	Includes fig. 3a, 3b, 33
3b	2	Low Profile S.H.C.S.	9697	
4	2	Cylinder screw	7182	
5	2	Washer	5994	
6	2	Washer	6936	Torque = 4 - 4.5 Nm (3 - 3.3 ft-lb)
7	1	Stator plate complete	5591	
8	1	Flywheel alignment pin	7985	
9	1	CDI - Box	5664	Mounted with silicone
10	2	Coil Mounting Screw	2469	
15	1	Ignition coil	5682	Includes fig. 15
30	2	Spark plug cap	5827	
31	1	Spark plug	5668	Do not mix spark plug types
32	1	Voltage Regulator	5338	
33	1	Magnet Support	5724	
34	1	Spark plug lead, short	5666	Wire only; does not include fig. 30
36	1	Spark plug lead, long	5665	Wire only; does not include fig. 30
-	-	Spark Plug lead set	5661	Includes fig. 30, 34, 36

NOTES:

1) 1 HALL EFFECT SENSOR ON PLATE GENERATES TIMING PULSE.

2) ALWAYS USE SYSTEM 1. SYSTEM 2 IS JUST A BACK UP.

BLACK: GROUND.

BROWN: HALL EFFECT POWER 10VDC.

RED: HALL EFFECT SIGNAL.

GRAY AND BLUE: CDI POWER.

DUAL SYSTEM

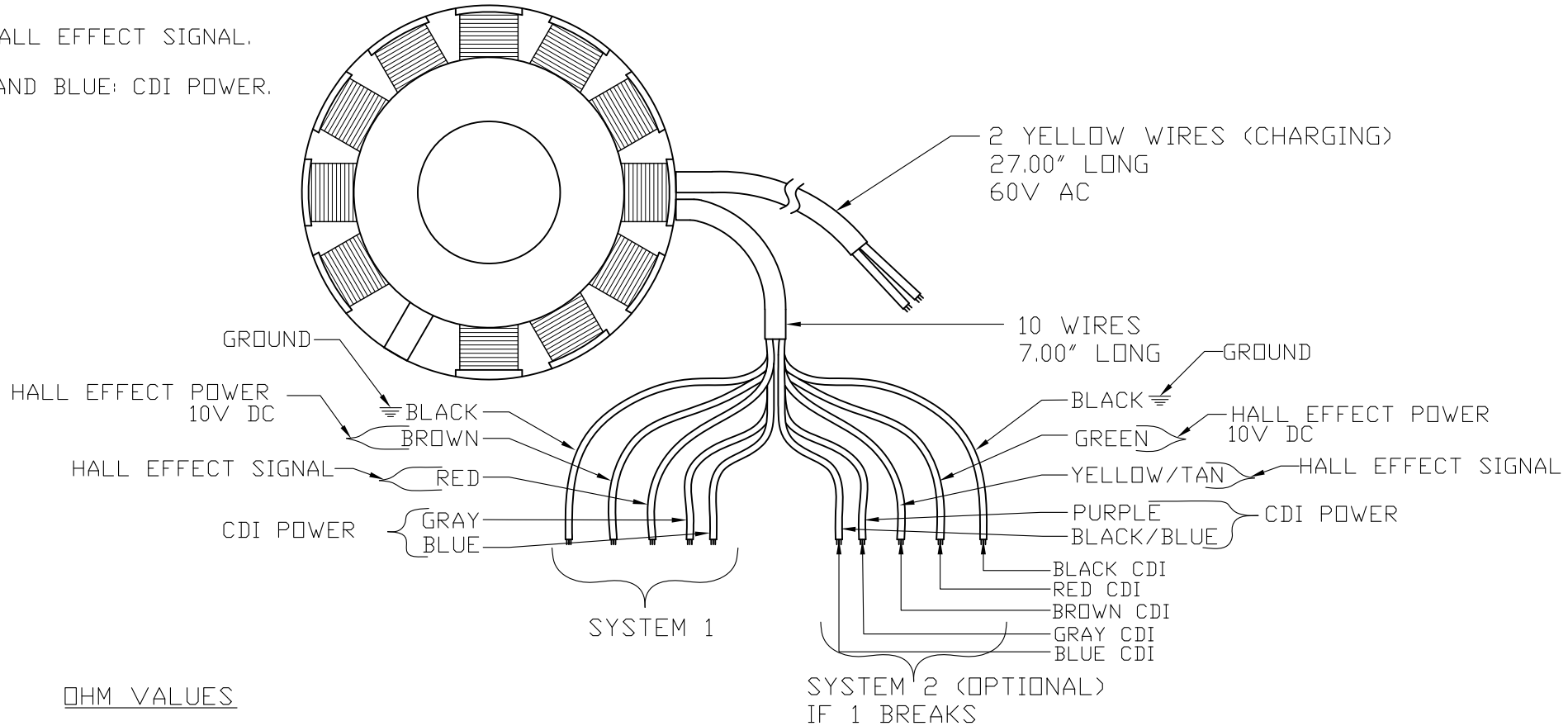
55/65HP MAGNETO

12 WIRES IN TOTAL

5 WIRES TO CDI.

5 WIRES REDUNDANT CDI (SYSTEM 2).

2 WIRE TO BATTERY CHARGE.



OHM VALUES

YELLOW & YELLOW: 0.4 ohm

BLACK & BLACK: 0.3 ohm

BLUE & GREY: 9.5 ohm

BLACK TO PLATE: 0.7 ohm

BILL OF MATERIAL			
REF.	PART #	DESCRIPTION	QTY.
X	XXXX	XXXX XXXX XXXX XXXX	X

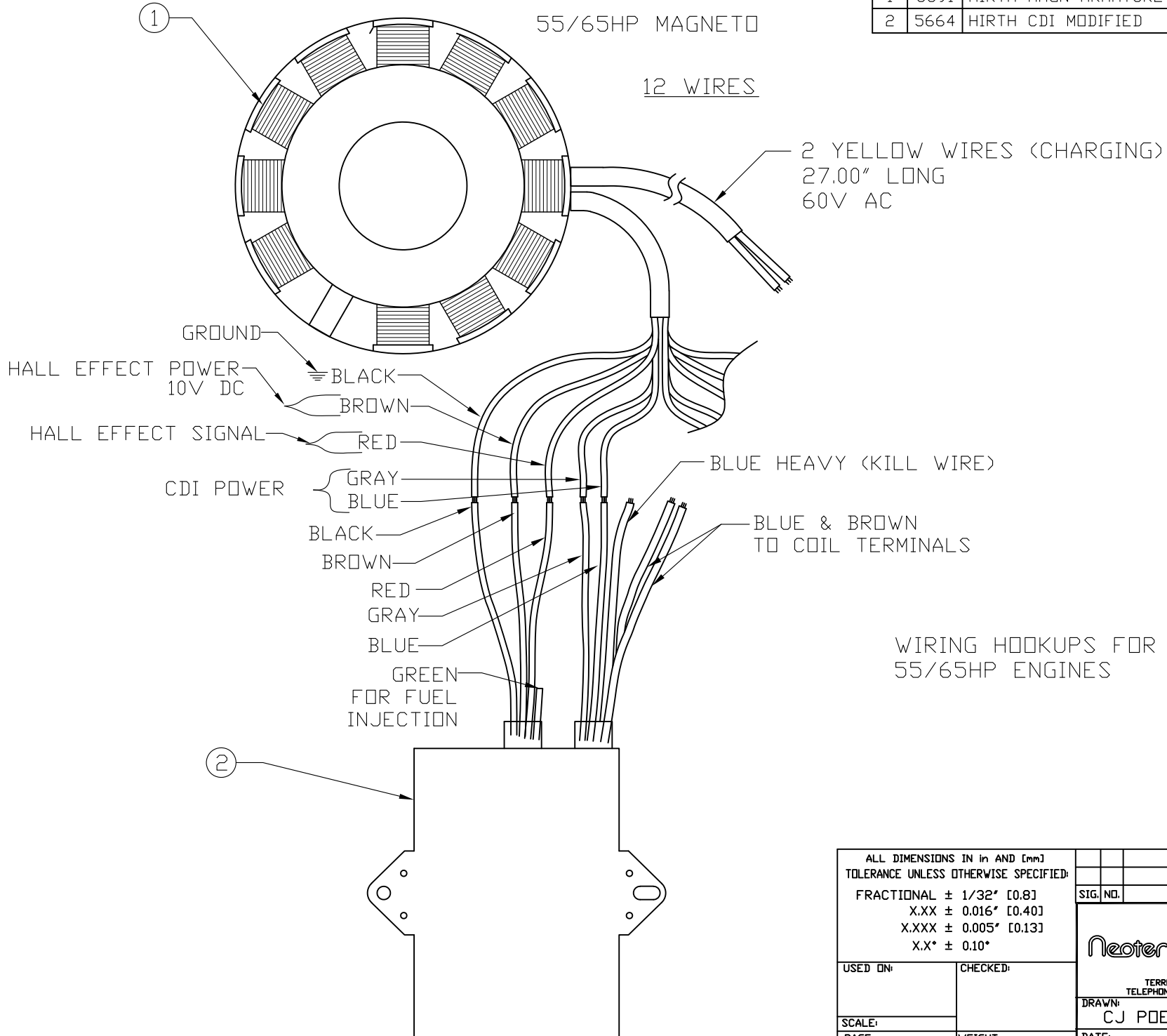
ALL DIMENSIONS IN in AND [mm]			
TOLERANCE UNLESS OTHERWISE SPECIFIED:			
FRACTIONAL ± 1/32" [0.8]		SIG. NO.	REVISION
X.XX ± 0.016" [0.40]		DATE	
X.XXX ± 0.005" [0.13]			
X.X* ± 0.10"			
USED ON:	CHECKED:	1649 TIPPECANOE STREET TERRE HAUTE, INDIANA, U.S.A. 47807-2394 TELEPHONE (812) 234-1120 FAX (812) 234-3217	
SCALE:		DRAWN:	NAME:
PAGE:	WEIGHT:	CJ POEHLEIN	HIRTH 55/65HP MAGNETO ARMETUR PLATE
1 OF 2		DATE:	NUMBER:
		14 APR, 2016	16644
			REV. 2

DUAL SYSTEM

55/65HP MAGNETO

12 WIRES

BILL OF MATERIAL			QTY.
REF.	PART #	DESCRIPTION	
1	5591	HIRTH MAGN ARMATURE PLATE & RESISTANCES	1
2	5664	HIRTH CDI MODIFIED	1




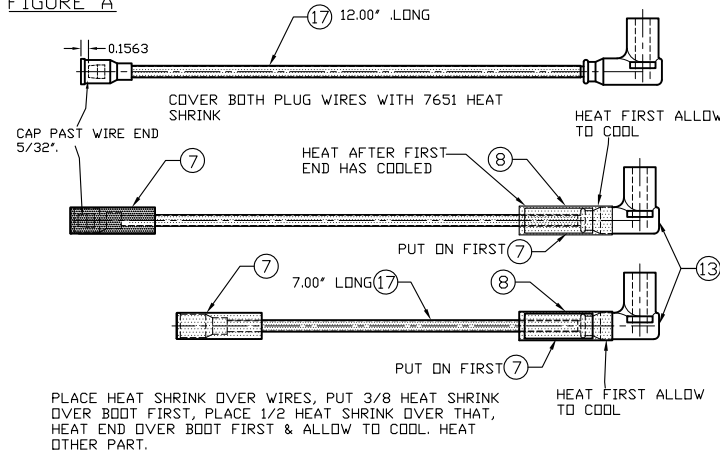
ALL DIMENSIONS IN IN AND [mm] TOLERANCE UNLESS OTHERWISE SPECIFIED:		SIG. NO.	REVISION	DATE
FRACTIONAL ± 1/32" [0.8] X.XX ± 0.016" [0.40] X.XXX ± 0.005" [0.13] X.X° ± 0.10°		 Neoteric Hovercraft Inc. 1649 TIPPECANOE STREET TERRE HAUTE, INDIANA, U.S.A. 47807-2394 TELEPHONE (812) 234-1120 FAX (812) 234-3217		
USED ON:	CHECKED:			
SCALE:	DATE:	DRAWN:	NAME:	REV.
PAGE: 2 OF 2	WEIGHT:	CJ POEHLEIN	55/65HP HIRTH MAGNETO ARMATURE PLATE	16644
		28 JUNE, 2016	NUMBER:	2

FIGURE A



BILL OF MATERIAL				
REF.	PART #	DESCRIPTION	QTY.	DPT.
1	2209	TERM. FITTING	11	
2	2371	WIRE TIE	6	
3	2372	WIRE TIE	6	✓
4	2378	SEALANT/ADHESIVE, BLACK	20	
5	2520	DIELECTRIC GREASE	10	
6	2732	SOLDERING FLUX	2	
7	3191	HEAT SHRINK	8	
8	3192	HEAT SHRINK	4	
9	3305	PLASTIC LIQUID ELECTRIC COATING	10	✓
10	3431	SOLDER	1.5	
11	5334	HIRTH CDI UNIT 55/65HP	1	
12	5335	HIRTH COIL 55/65HP	1	
13	5661	SPARK PLUG WIRE ASSEMBLY PAIR	1	
14	5664	MODIFIED HIRTH CDI	1	✓
15	5682	MODIFIED HIRTH COIL	1	✓
16	7650	HEAT SHRINK W/ ADHESIVE, BLACK	10	
17	7651	HEAT SHRINK W/ ADHESIVE, BLACK	28.5	
18	9180	SALT WATER COIL/CDI PROTECTION BAG	1	
19	9181	COIL/CDI ASSEMBLY	1	

ORDER OF OPERATIONS

- 1) PUT HEAT SHRINK ON PLUG WIRES AS SHOWN IN FIGURE A.
- 2) EXTEND ALL WIRES AS SHOWN IN FIGURE B.
- 3) FIT TERMINAL FITTING ON WIRES AS SHOWN. * DO NOT FIT TERM. TO BROWN OR BLUE WIRE
- 4) CUT TABS OFF COIL USING BANDSAW. FIGURE C.
- 5) BOND COIL TO CDI AS SHOWN IN FIGURE D.
- 6) ROUTE BROWN AND BLUE WIRE AND SOLDER AS SHOWN IN FIGURE D.
- 7) FIT PLUG WIRES TO COIL & TIE WITH WIRE TIES.
- 8) GOOD SOLDERED TERMINALS OF COIL AS SHOWN IN FIGURE E.
- 9) PLACE IN BAG #9180.

FIGURE B

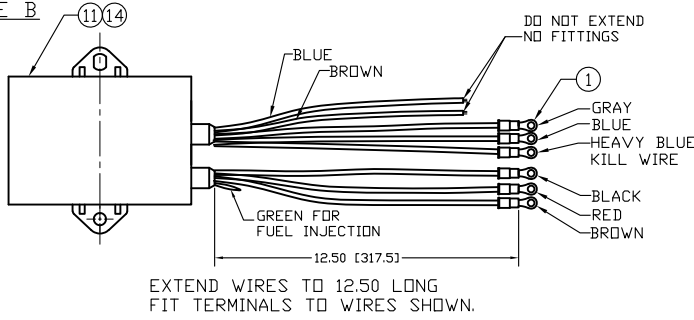
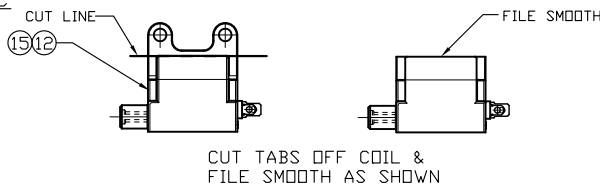


FIGURE C



ALL DIMENSIONS IN IN AND [mm]
TOLERANCE UNLESS OTHERWISE SPECIFIED

CJ 3	ADDED PAGE 3 TO SHOW HOOKUP		
SIG. NO.	REVISION	DATE	

FRACTIONAL ± 1/32" [0.8]
X.XX ± 0.016" [0.40]
X.XXX ± 0.005" [0.13]

USED ON: 3720 CHECKED:

SCALE: WEIGHT:

PAGE: 1 OF 3

Neoteric Hovercraft Inc.
1649 TIPPECANOE STREET
TERRE HAUTE, INDIANAPOLIS, 47607-2994
TELEPHONE: 824-1125 FAX: 824-3817

DRAWN: CJ POEHLIN NAME: HIRTH 55/65HP
COIL/COIL SALT WATER ASSEMBLY

DATE: 14 APR, 2017 NUMBER: 16461 3 REV: 1

FIGURE D

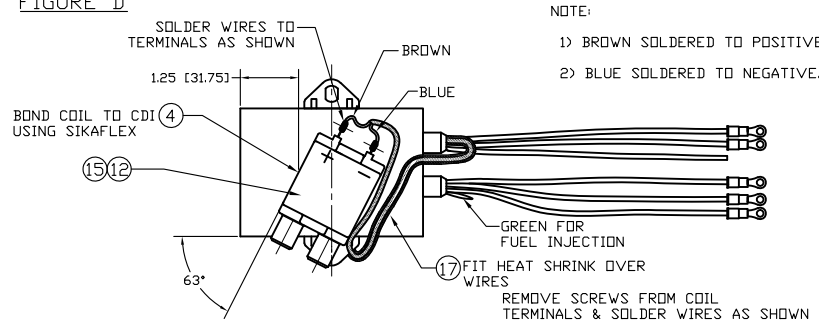
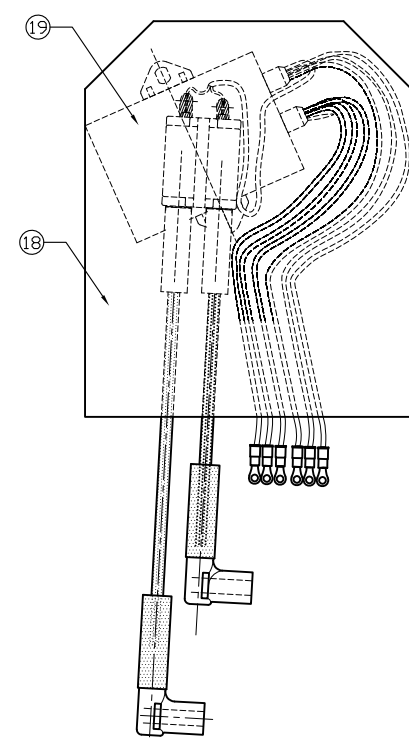
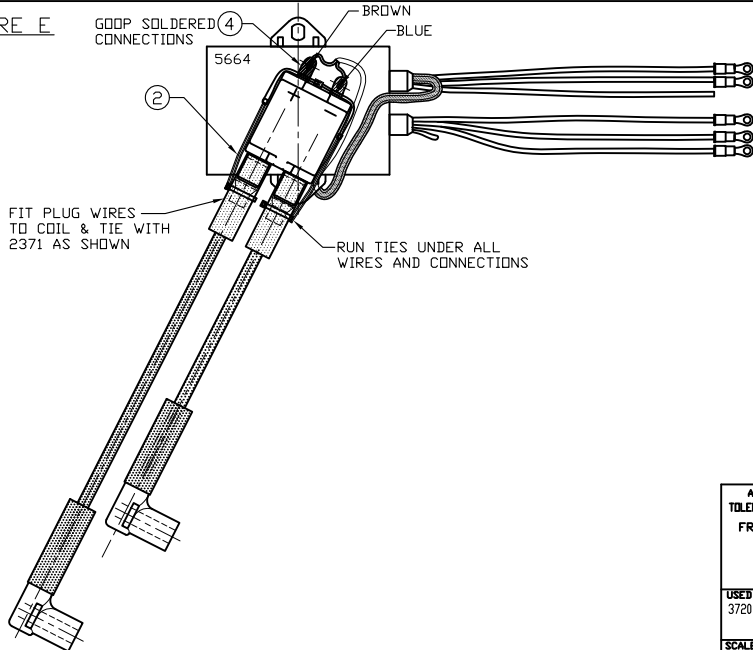


FIGURE E



ALL DIMENSIONS IN IN AND [mm]
TOLERANCE UNLESS OTHERWISE SPECIFIED

CJ 3	ADDED PAGE 3 TO SHOW HOOKUP		
SIG. NO.	REVISION	DATE	

FRACTIONAL ± 1/32" [0.8]
X.XX ± 0.016" [0.40]
X.XXX ± 0.005" [0.13]
X.X" ± 0.10"

USED ON: 3720 CHECKED:

SCALE: WEIGHT:

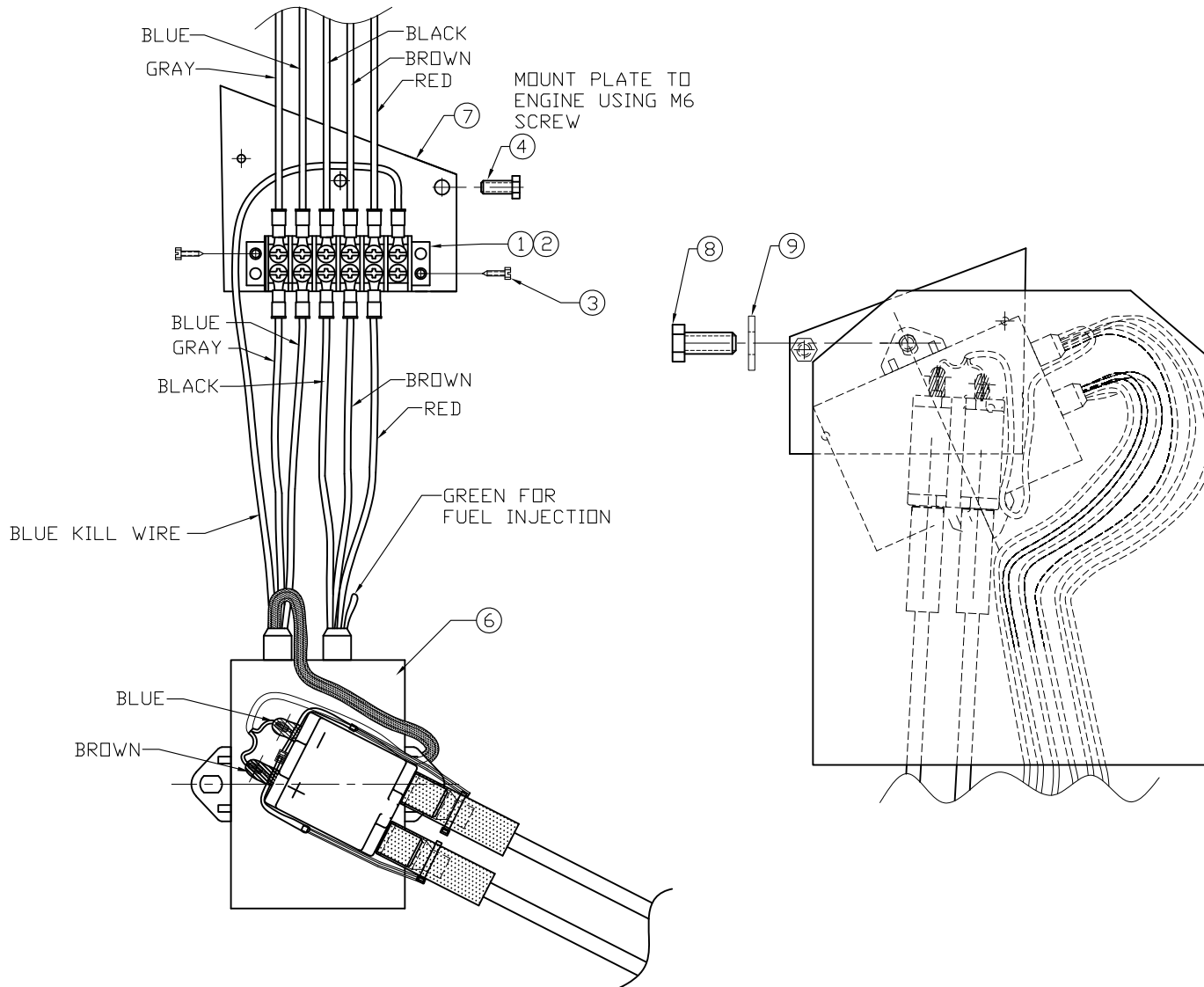
PAGE: 2 OF 3

Neoteric Hovercraft Inc.
1649 TIPPECANOE STREET
TERRE HAUTE, INDIANAPOLIS, 47607-2994
TELEPHONE: 824-1125 FAX: 824-3817

DRAWN: CJ POEHLIN NAME: HIRTH 55/65HP
COIL/COIL SALT WATER ASSEMBLY

DATE: 14 APR, 2017 NUMBER: 16461 3 REV: 1

WIRES FROM MAGNETO



BILL OF MATERIAL			
REF.	PART #	DESCRIPTION	QTY.
1	1365	TERMINAL BLOCK	1
2	2378	SEALANT/ADHESIVE, BLACK	6
3	2459	SCREW, SS	2
4	2144	HEX BOLT, SS	1
5	2372	WIRE TIE	2
6	9181	CDI/COIL ASSEMBLY	1
7	9182	CDI/COIL MOUNT PLATE SALT WATER MARINIZATION	1
8	2391	HEX BOLT, SS	1
9	2070	WASHER, SS	1

NOTE:

PART NUMBERS CALLED OUT ON PAGE 3 LISTED ON PAGE 3 BILL OF MATERIALS ONLY

NOTES:

- 1) PUT 2209 FITTING ON BLACK WIRE FROM ENGINE HARNESS, INSTALL ACROSS FROM BLUE KILL WIRE
- 2) USE BOLT & WASHER TO MOUNT BAG TO BACKSIDE OF PLATE AFTER PLATE IS MOUNTED TO COVER.

ALL DIMENSIONS IN IN AND [mm] TOLERANCE UNLESS OTHERWISE SPECIFIED		SIG. NO.	REVISION	DATE
USED ON: 3720	CHECKED:	 1649 TIPPECANOE STREET TERRE HAUTE, INDIANA, U.S.A. 47087-2394 TELEPHONE: 824-1188 FAX: 824-3217		
SCALE:	WEIGHT:			
PAGE: 3 OF 3		DRAWN: CJ POEHLIN	NAME: COIL SALTWATER INSTALLATION	REV. 3
		DATE: 14 APR, 2017	NUMBER: 16461	

2-Cylinder Fuel Injection Electrical System

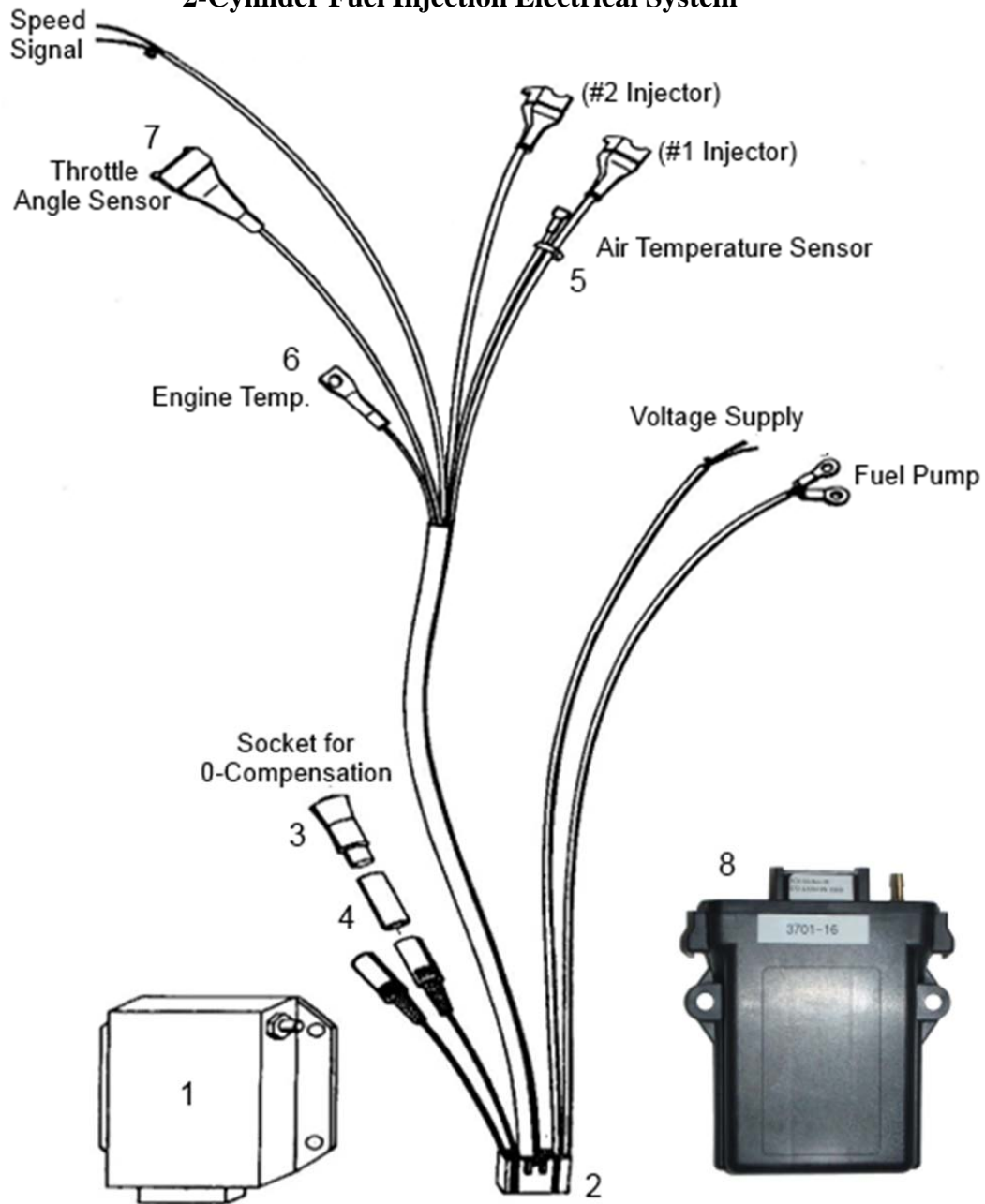


Fig.No.	Qty	Description	Neoteric Part #	Note
1	1	Red Computer Box	5328	Used on Early HoverTrek Models
2	1	Cable harness, Red	6235	Harness for Red Computer Box
2	1	Cable harness, Black	6237	Harness for Black Computer Box
3	1	0-compensation plug	7205	Used when optional manual enrichment device not used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

Hirth HT4 Air Box Assembly

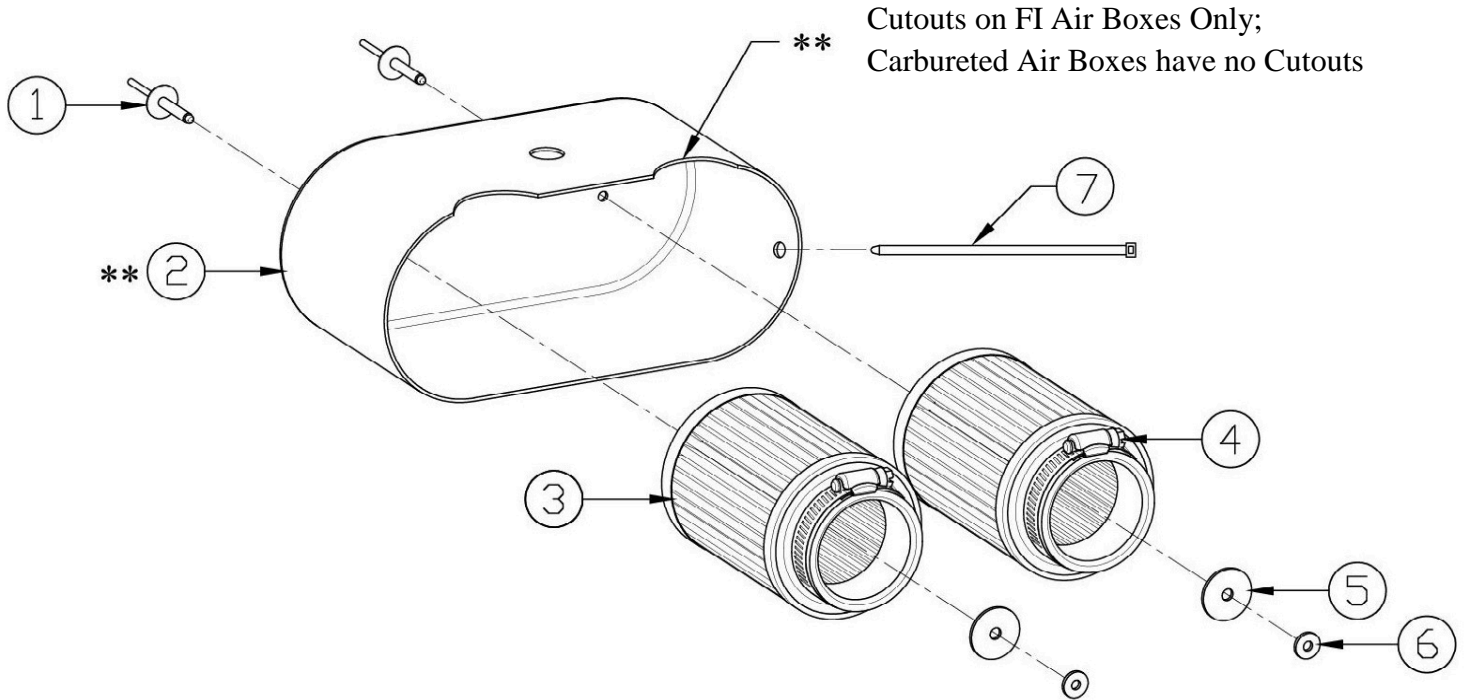


Fig. No.	Qty	Designation	Neoteric Part #	Remark
1	2	Rivet	2156	
2	1	Fiberglass Air Box, Carbureted	5584	
2	1	Fiberglass Air Box, FI	7764	
3	2	Air Filter	6622	Includes item 4
4	2	Hose Clamp	-	
5	2	Large Washer	2516	
6	2	Small Washer	2352	
7	2	Wire Tie	2371	Safety tie
-	-	Air Box Assembly, Carbureted	5583	Includes item 1 - 7 as shown above
-	-	Air Box Assembly, FI	7765	Includes item 1 - 7 as shown above

Hirth Fuel System

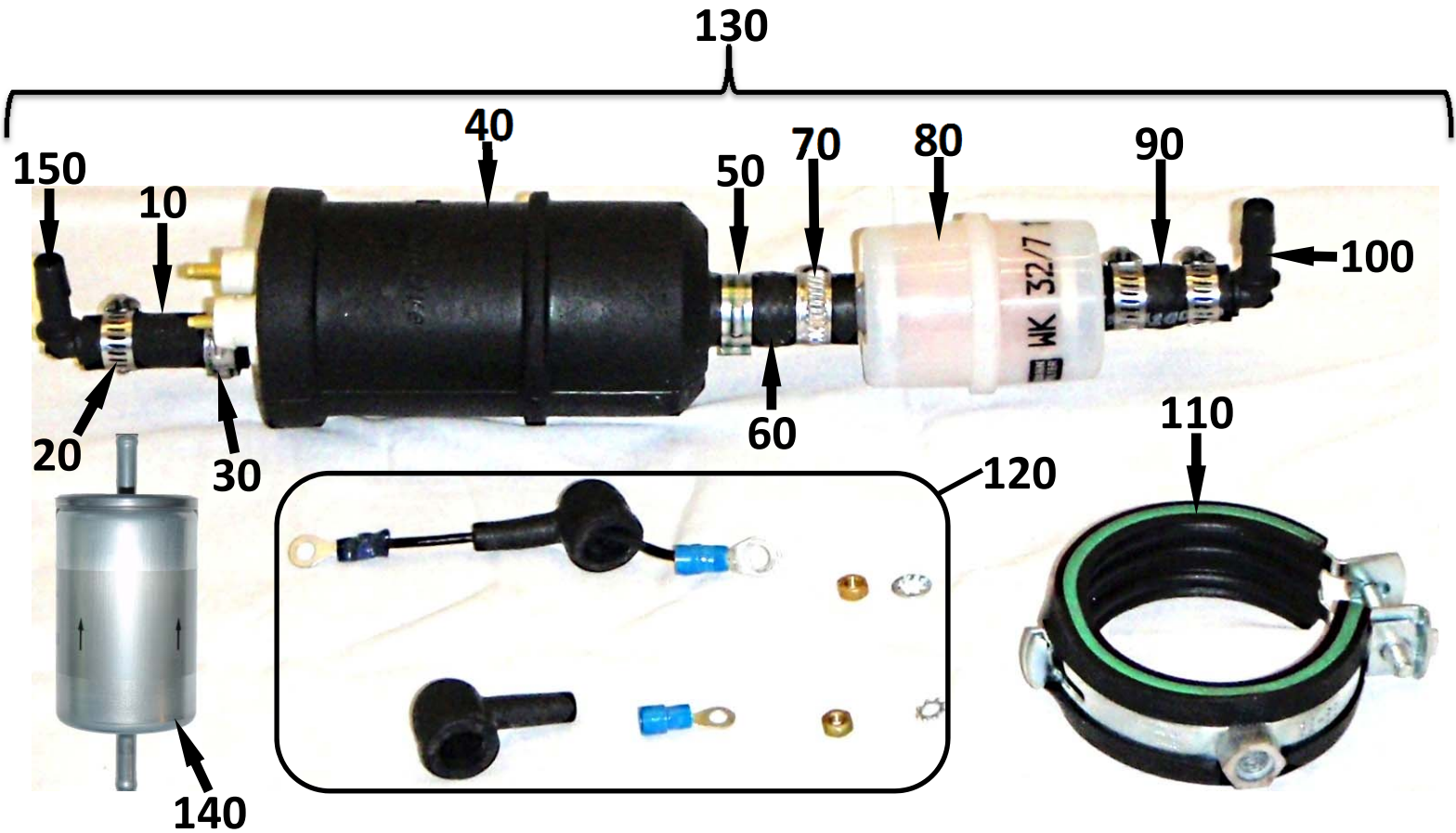
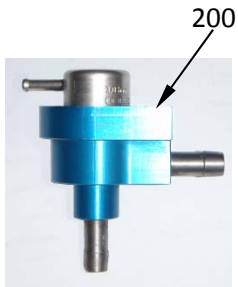
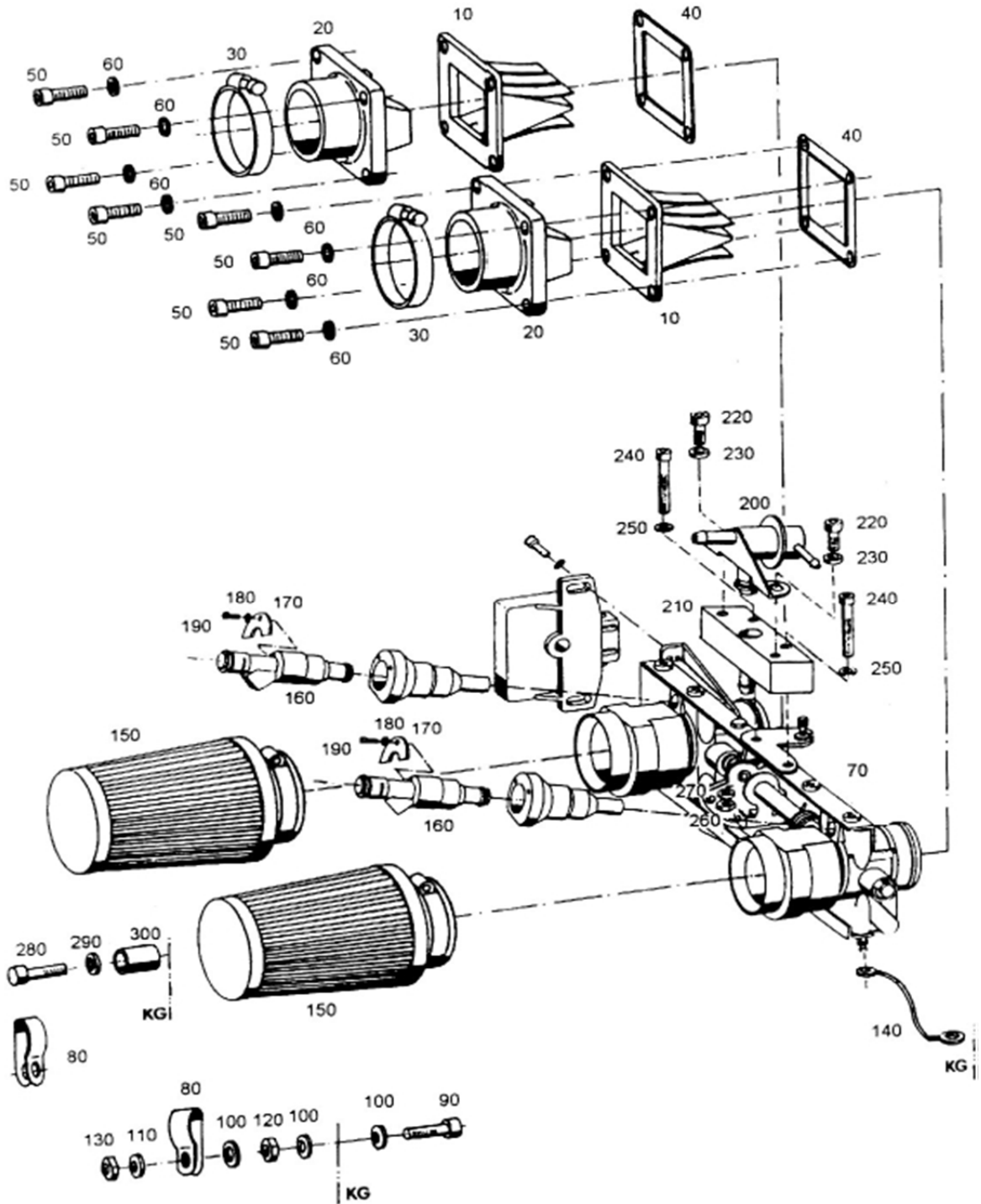


Fig. No.	Qty.	Description	Neoteric Part #	Remark /Notes
10	1	Fuel Line	6335	
20	3	Screw/Band Hose Clamp	2203	
30	1	Pinch Hose Clamp, Sm	5993	
40	1	Electric Fuel Pump	6414	
50	1	Pinch Hose Clamp, Lg	5986	
60	1	Fuel Line	6334	
70	1	Gapless Hose Clamp	6943	
80	1	Fuel Filter	5372	
90	3"	Fuel Line	3193	
100	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

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

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

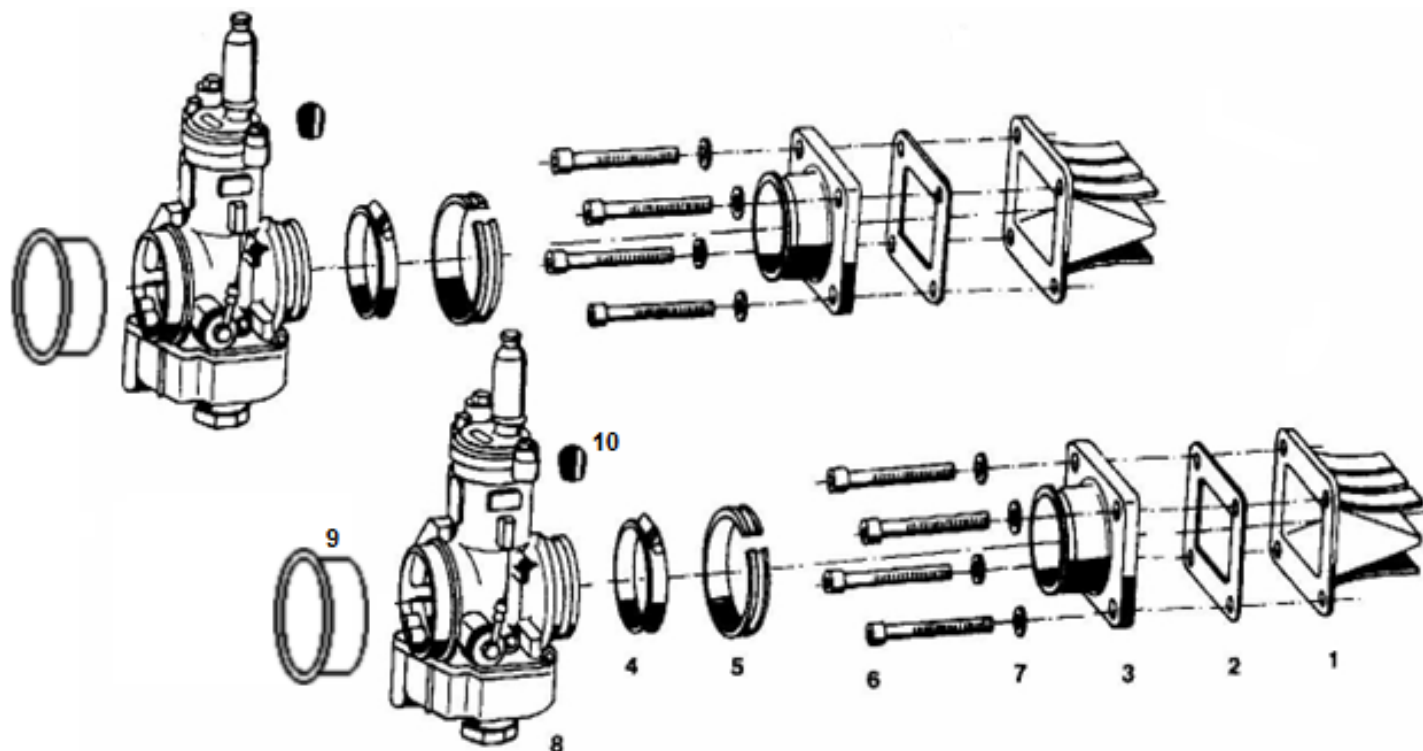
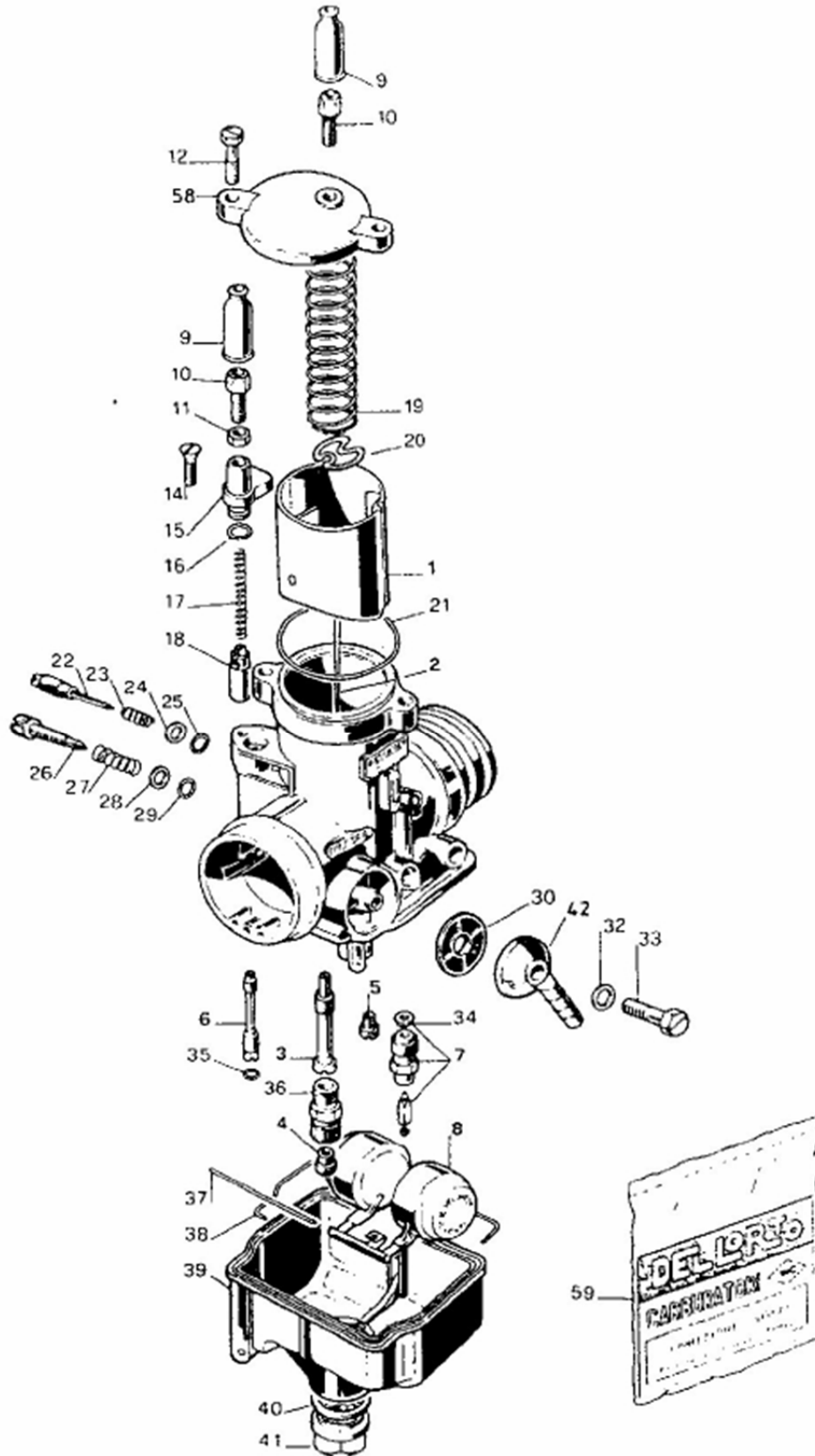


Fig No.	Qty.	Description	Neoteric Part #	Remark/Note
1	2	Reed valve	7203	
2	2	Gasket	5463	
3	2	Intake manifold/carb flange	6568	
4	2	Hose clamp	9018	
5	8	Rubber	9019	
6	8	Cylinder screw	7183	Torque = 9.6 - 11 Nm (7.1 - 8.1 ft-lb) Loctite 243
7	2	Washer	6916	
8	1	Dellorto Carburetor 65HP Front	9264	See Form 17754 / 17755 for Carb Parts
8	1	Dellorto Carburetor 65HP Back	9265	
9	2	Protective stopper	7207	
10		Hirth Rubber Socket	7208	

Carburetor (Dellorto) PHBE 34

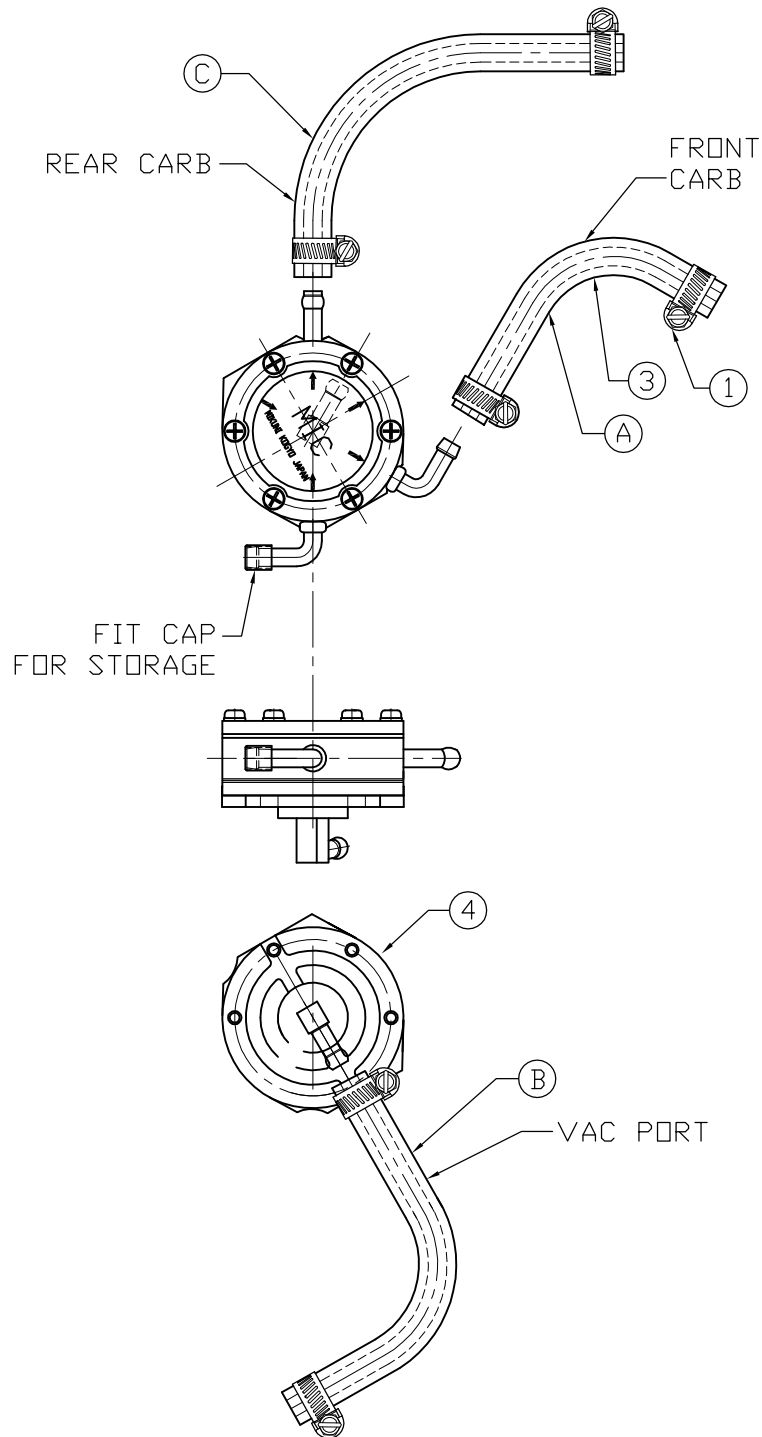


Carburetor (Dellorto) F 33 A (PHBE 34 BD 6832)

Fig. No.	Qty.	Description	Neoteric Part #	Remark/Note
1	1	Throttle slide	9022	
2	1	Jet needle, K36	6563	See Form # 17367 for all Dellorto Jets
3	1	Needle jet	-	
4	1	Main jet	-	
5	1	Idle jet, 65	9023	
6	1	Cold start / Choke jet	7788	
7	1	Float valve	9024	
8	1	Float	6909	
9	2	Rubber cap	6113	*Included in 7828 Kit
10	1	Choke Cable Adjustment	7828	*Must Purchase 7828 Kit
11	1	Choke Cable Adjustment Locknut	7828	*Must Purchase 7828 Kit
12	2	Top Cover Screw	9027	
14	1	Choke Support Screw	9028	*Must Purchase 7828 Kit
15	1	Choke Support Casting	9029	*Must Purchase 7828 Kit
16	1	Choke Support O-ring	7828	Included in Pos. 59
17	1	Choke Valve Spring	9030	*Must Purchase 7828 Kit
18	1	Choke valve	7828	*Must Purchase 7828 Kit
19	1	Throttle Slide Spring	9025	
20	1	Bracket plate	6973	
21	1	Top Cover O-Ring	9026	Included in Pos. 59
22	1	Mixture Adjustment Screw	9031	
23	1	Mixture Adjustment Spring	9032	
24	1	Mixture Adjustment Washer	9033	
25	1	Mixture Adjustment O-ring	-	Included in pos. 59
26	1	Idle Adjustment Screw	9034	
27	1	Idle Adjustment Spring	9035	
28	1	Idle Adjustment Washer	9036	
29	1	Idle Adjustment O-ring	-	Included in Pos. 59
30	1	Fuel Inlet Filter	9037	
32	1	Fuel Inlet O-ring	-	Included in Pos. 59
33	1	Fuel Inlet Screw	9038	
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	9039	
37	1	Float Pivot Pin	9040	
38	1	Sealing for float chamber	9296	Included in Pos. 59
39	1	Float Bowl	9041	
40	1	Float Bowl Gasket Washer	7213	Included in Pos. 59
40	1	Float Bowl Gasket O-Ring	2739	Optional Replacement For Washer
41	1	Float Bowl Nut	9042	
42	1	Fuel Inlet Nipple	6114	
58	1	Carburetor Top Cover	9043	
59	1	Gasket set	5468	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	5443	
	Main Jet, 142	5444	
	Main Jet, 145	5467	
	Main Jet, 160	5863	
	Main Jet, 150	9294	
	Main Jet, 158	6193	
	Main Jet, 165	9295	
	Main Jet, 170	8207	
	Main Jet, 162	5864	
	Main Jet, 175	9598	
	Main Jet, 180	9599	
	Main Jet, 190	9374	
	Main Jet, 200	9878	
	1	Idle Jet, 40	9817
1	Idle Jet, 65	9023	
1	Cold Start / Choke Jet, 90	7788	
1	Atomizer / Needle Jet, AB/265	9069	
	Atomizer / Needle Jet, AB/266	5726	
	Atomizer / Needle Jet, AB/262	5760	
	Atomizer / Needle Jet, AB/268	6194	
1	Jet Needle, K35	9292	
1	Jet Needle, K36	6563	



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



CUT SCHEDULE	
REF.	LENGTH
A	7.5
B	5.75
C	15.13

ALL DIMENSIONS IN In AND [mm]
TOLERANCE UNLESS OTHERWISE SPECIFIED:

X.XX ± 0.063" [0.160]

SIG. NO.	REVISION	DATE
----------	----------	------

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

USED ON:	CHECKED: EW3 12-JAN-2015 CJ173 12-JAN-2015	DRAWN: CJ POEHLIN	NAME: 65HP DELLORTO FUEL PUMP ASSY.
SCALE:	DATE: 1 FEB, 2013	NUMBER: 17747	REV. 2
PAGE: 1 OF 1	WEIGHT:		

**65HP Gasket Set
(3203)**

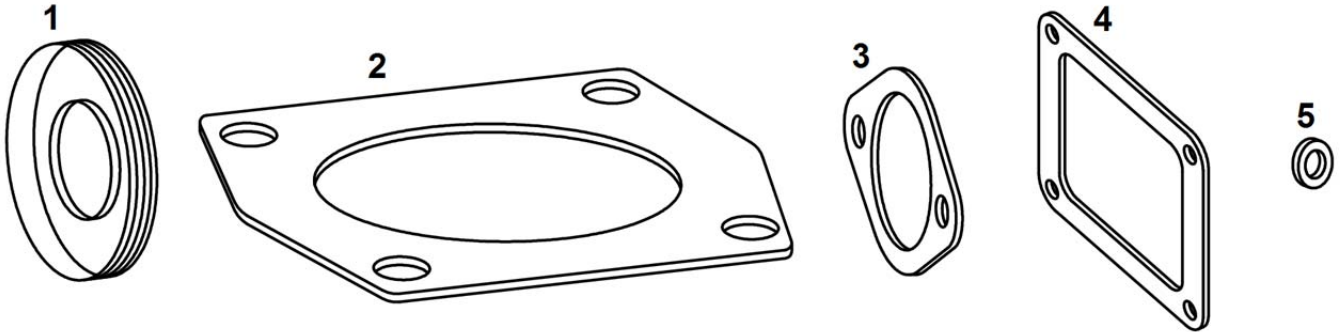
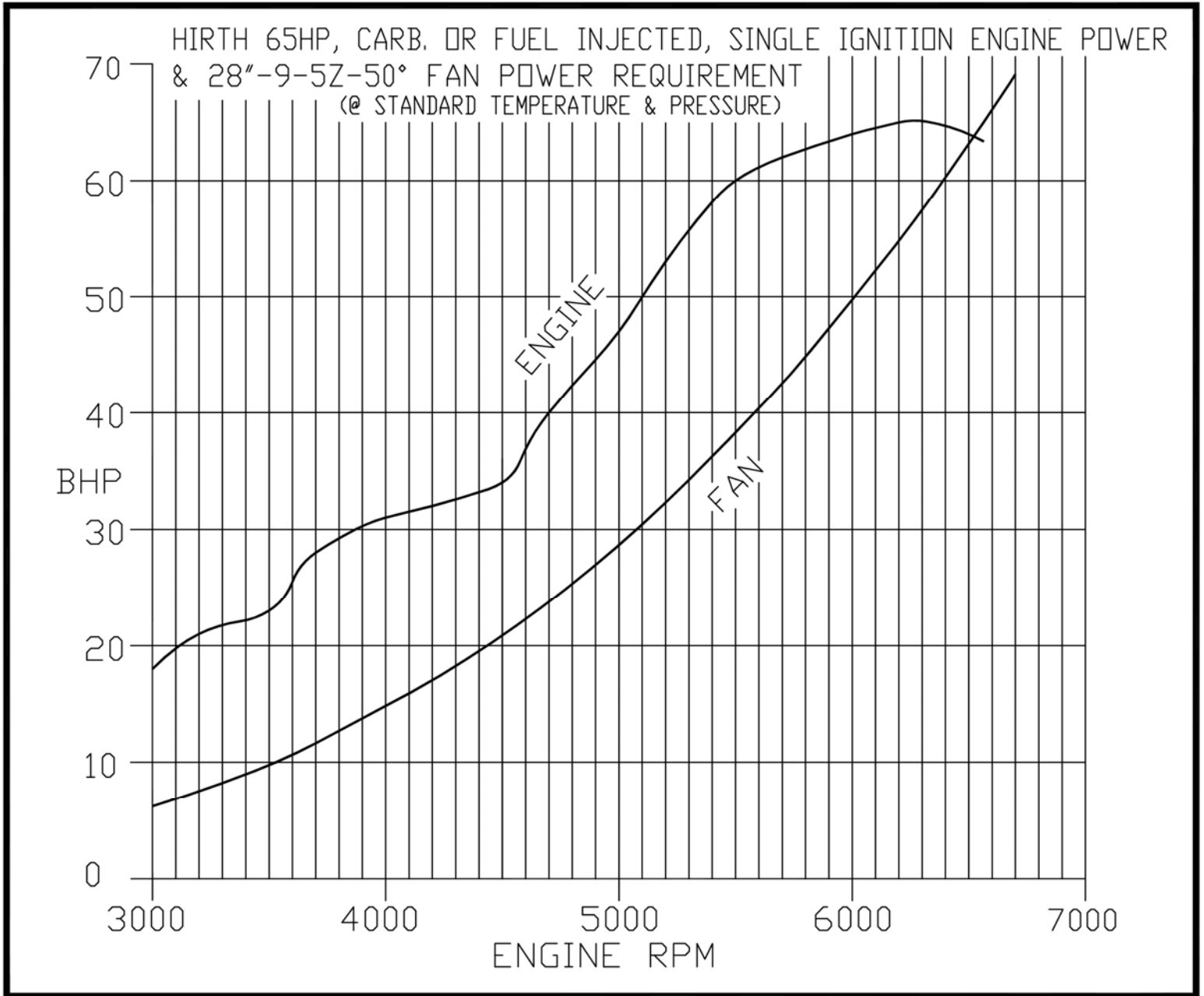


Fig. No.	Qty.	Description	Neoteric Part #	Remark / Notes
-	1	65HP Gasket Set	7988	Includes Fig 1, 2, 3, 4, 5
1	2	Crankshaft Seal	5453	
2	2	Cylinder Base Gasket	5455	
3	2	Exhaust Outlet Gasket	5245	
4	1	Single Carb Intake Gasket	5463	
5	2	Vacuum Nipple Gasket Washer	5629	

65HP Hirth Engine/Fan Power Requirement Graph



65HP Fan Altitude Performance Graph

