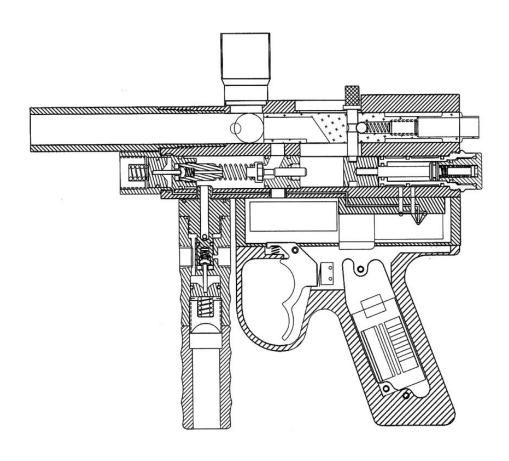
### Indian Creek Design, Inc.

# B2K

### 2003 Standard Model

### **Assembly Manual**



#### **B2K Assembly Instructions:**

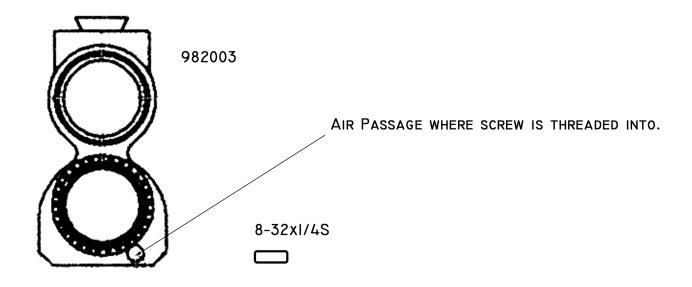
B2K Upper Receiver Set Screw Installation	4
Feed Tube and Ball Detent Assembly	5
B2K Low Pressure Regulator Assembly	6
B2K Valve Assembly	7
B2K Cylinder Assembly	8
Bolt Assembly	9
B2K Manifold and ASA Adaptor	10
High Pressure Regulator Assembly	11
Trigger and Grip Assembly	12
Final Assembly of B2K Upper and Lower Receiver	15
Testing Instructions	16
Appendix: Parts List	17

#### **Introduction:**

The B2K Standard Model paintball gun is relatively easy to assemble. You will need the proper tools and equipment, including a vise, red and blue loctite, Dow 33 Clear Lithium Grease, and assorted allen keys and screwdrivers. It is easiest to assemble in relatively the same order as these pages.

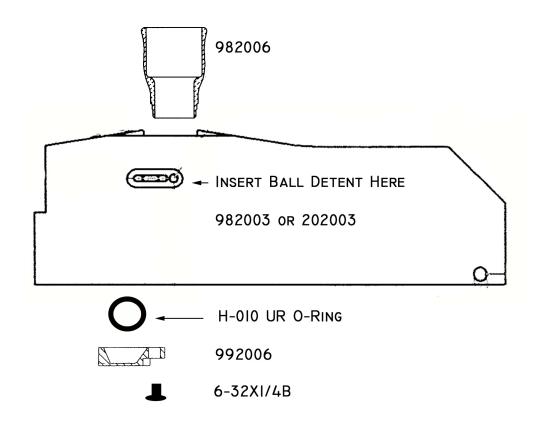
Prior to assembly, make sure that all pieces are properly deburred, cleaned, and coated, if required. Seal edges, like those on the regulator cup 982052 and valve seat 982030 must be sanded smooth and have no dents or marks. Nubbins on pieces like the plungers 982053 and 202052 must be trimmed. O-Rings and seals must be smooth, clean, and in good condition.

#### **B2K Upper Receiver Set Screw Installation**



APPLY A SMALL AMOUNT OF JB WELD TO THE THREADS OF THE 8-32XI/4 SET SCREW. SCREW INTO HOLE ON THE BOTTOM RIGHT HAND SIDE ON THE FRONT OF UPPER RECEIVER 982003 UNTIL JUST BELOW FLUSH. DO NOT SCREW IN TOO FAR OR IT WILL BLOCK OFF THE AIR PASSAGE FOR THE LOW PRESSURE REGULATOR. VERY CAREFULLY DAB JB WELD ON THE FRONT OF SCREW TO COMPLETELY SEAL AIR HOLE. FLATTEN JB WELD BY RUNNING A STRAIGHT EDGE OVER THE TOP AND CLEAN ANY JB WELD OFF OF THE AREA SURROUNDING THE HOLE. LET SIT FOR 24 HOURS BEFORE COMPLETING ASSEMBLY.

#### FEED TUBE AND BALL DETENT ASSEMBLY

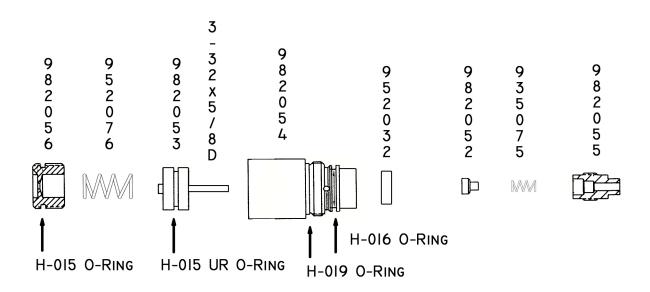


APPLY A SMALL DAB OF RED LOCTITE TO THE THREADS OF FEED TUBE 982006. CAREFULLY SCREW INTO UPPER RECEIVER. TIGHTEN FIRMLY, WITHOUT PUTTING UNBALANCED STRESS ON THE FEED TUBE, WHICH MAY CAUSE IT TO BEND. WIPE OFF ANY EXCESS LOCTITE.

CAREFULLY DROP THE H-010 URETHANE 90 O-RING INTO THE SLOT ON THE SIDE OF THE UPPER RECEIVER. LAY THE BALL DETENT CASING 992006 OVER THE O-RING SO THAT IT HOLDS THE O-RING PROPERLY. SCREW IN THE 6-32XI/4 BUTTONHEAD SCREW.

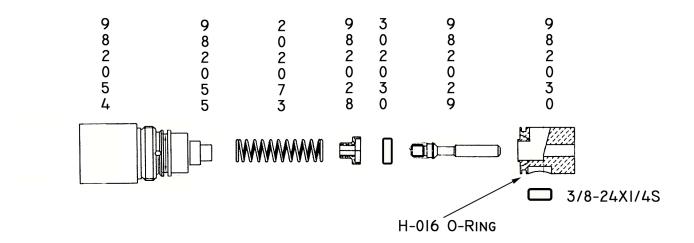
FOR BKO, THERE IS ONLY ONE BALL DETENT. FOR THE B2K STANDARD MODEL, THERE ARE TWO. REPEAT THE ABOVE PROCESS ON THE OTHER SIDE.

#### **B2K Low Pressure Regulator**



PRESS THE 3-32X5/8 DOWEL PIN INTO THE PLUNGER 982053. MAKE SURE THE PIN IS STRAIGHT AND THE PLUNGER HAS AN OVERALL HEIGHTH OF .895 IN. PLACE ALL ORINGS ON DESIGNATED PIECES. IN THE BACK OF BODY 982054, PRESS IN THE SEAL 952032. HOLDING THE CUP HOUSING 982055 WITH THE LARGER BORE UP, INSERT THE SPRING 935075 AND THEN THE REGULATOR CUP 982052 WITH THE CUP PORTION FACING UP. SCREW THE CUP HOUSING 982055 ONTO THE BODY 982054 BY TILTING THE BODY 982054 UPSIDE DOWN. BE CAREFUL NOT TO DISTURB THE CUP 982052. ONCE THE CUP HOUSING 982055 IS HAND-TIGHT, USE A VISE OR PLIERS TO TURN IT AN ADDITIONAL 1/4 TURN. DO NOT OVERTIGHTEN. THIS WILL CAUSE THE REGULATOR TO OVERPRESSURIZE. USE A SMALL ALLEN KEY AND PUSH THROUGH THE OTHER SIDE OF BODY 982054 AND MAKE SURE THE CUP 982052 BOUNCES FREELY UP AND DOWN. LUBRICATE THE PLUNGER 982053 LIBERALLY WITH DOW 33 CLEAR LITHIUM GREASE. LAY THE ADJUSTMENT SCREW 982056 WITH THE HOLE PORTION FACING UP AND THE ADJUSTMENT SIDE FACE DOWN. REST THE SPRING 952076 IN THE ADJUSTMENT SCREW HOLE. PLACE THE PLUNGER 982053 ON TOP OF THE SPRING 952076 WITH THE NUBBIN FACING DOWN AND THE STEEL DOWEL PIN FACING UP. VERY CAREFULLY SLIDE THE BODY 982054 DOWN OVER THE PLUNGER 982053 AND SPRING 952076. CAREFULLY BEGIN SCREWING IN THE ADJSTMENT SCREW 982056 IN THE FRONT OF BODY 982054 UNTIL IT IS FLUSH. LUBRICATE THE OUTSIDE O-RINGS ON THE BODY 982054 BEFORE SCREWING IT INTO THE UPPER RECEIVER 982003. (SEE THE DIRECTIONS FOR THE B2K VALVE ASSEMBLY).

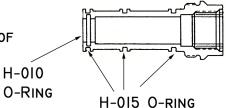
#### **B2K VALVE ASSEMBLY**

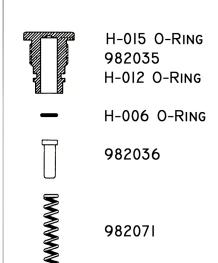


PRESS VALVE SEAL 302030 INTO CUP 982028. APPLY A SMALL DAB OF BLUE LOCTITE TO THE THREADS OF VALVE PIN 982029 AND SCREW VALVE PIN 982029 INTO BRASS CUP 982028 AND SEAL UNTIL THE CHAMFERRED EDGE ON BOTTOM OF PIN 29 MAKES CONTACT WITH SEAL. IT SHOULD BE TIGHT. USE A VISE IF NECESSARY. PLACE O-RINGS ON DESIGNATED PIECES. LUBRICATE THE H-016 O-RING ON SEAT 982030 WITH DOW 33 CLEAR LITHIUM GREASE AND SLIDE SEAT 30 INTO THE FRONT OF BOTTOM BORE OF MAIN BODY 982003 WITH THE LIP SIDE OF SEAT FACING OUT TOWARDS FRONT, THE SCREW MATING PORTION FACING DOWN, AND THE AIR PASSAGE FACING UP. FROM BODY OF UPPER RECEIVER, USE A WRENCH TO ADJUST THE SCREW MATING PORTION PROPERLY SO THAT IT LINES UP CORRECTLY WITH THREADS ON THE BOTTOM OF RECEIVER. APPLY A DAB OF RED LOCTITE TO THE THREADS OF 3/8-24XI/4 SET SCREW AND THREAD INTO PROPER HOLE HAND-TIGHT SO THAT IT HOLDS THE SEAT. DO NOT OVERTIGHTEN. THIS WILL PUSH THE SEAT UP AND THE O-RING WILL NOT SEAL PROPERLY. LUBRICATE STEEL END OF PIN 982029 WITH DOW 33 CLEAR LITHIUM GREASE AND DROP INTO UPPER RECEIVER SO THAT THE STEEL PIN PORTION SLIDES INTO THE SEAT 982030 AND THE CUP AND SEAL PORTION MATES WITH THE LIP ON THE SEAT. ATTACH SPRING 202073 TO THE GUIDE PORTION OF CUP HOUSING 982055. LUBRICATE H-016 O-RING ON REGULATOR BODY 982054 WITH DOW 33 CLEAR LITHIUM GREASE AND SLIDE ENTIRE UNIT INTO BORE OF UUPER RECEIVER SO THAT THE FRONT OF SPRING 202073 SLIDES OVER THE BASE OF VALVE CUP 202028. SCREW IN LP REGULATOR 982054.

#### **B2K CYLINDER ASSEMBLY**

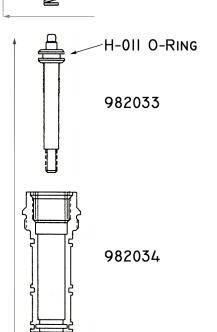
PLACE H-010 O-RING INSIDE FRONT OF CYLINDER 982034 IN GROOVE. PLACE THREE H-015 O-RINGS IN OUTSIDE GROOVES OF BODY.





PLACE O-RINGS ON DESIGNATED PIECES. DROP H-006 O-RING INSIDE END CAP 982035, LAYING FLAT. DROP SPRING GUIDE 982036 INTO END CAP 982035, ON TOP OF H-006. PLACE SPRING 982071 ON TOP OF SPRING GUIDE.

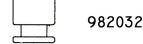
LUBRICATE H-OII O-RING AND PISTON 982033 WITH DOW 33 CLEAR LITHIUM GREASE. SLIDE PISTON INTO CYLINDER BODY 982034, O-RING ON THE BACK SIDE AND THREADS THROUGH THE FRONT. TILT CYLINDER BODY UPSIDE DOWN AND SLIDE OTHER END OF SPRING 982071 ONTO THE BACK END OF PISTON 982003. PUSH ENTIRE END CAP ASSEMBLY INTO BODY 982034 AND SREW INTO PLACE.



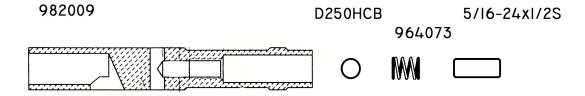
APPLY A SMALL AMOUNT OF RED LOCTITE TO THE THREADS OF PISTON 982033. SCREW ON HAMMER 982032 AND TIGHTEN. USE A VISE TO TIGHTEN DOWN. PUSH DOWN ON HAMMER 982032 AND MAKE SURE IT SNAPS BACK QUICKLY AND WITHOUT INTERFERENCE BY THE SPRING PRESSURE BEHIND PISTON.

LUBRICATE OUTSIDE H-015 O-RINGS LIBERALLY WITH DOW 33 CLEAR LITHIUM GREASE AND THEN SLIDE CYLINDER ASSEMBLY INTO THE BACK BOTTOM BORE OF THE UPPER RECEIVER 982003. SCREW INTO THREADS ON RECEIVER.

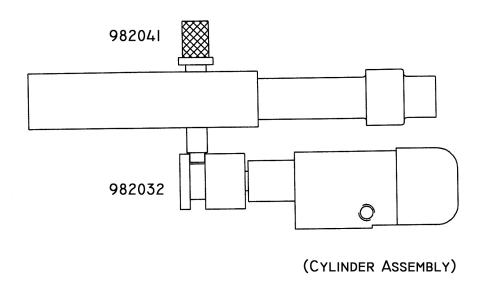
WHEN THE BOLT 982009 HAS BEEN ASSEMBLED, THE LINK PIN 982041 SLIDES THROUGH THE BOLT 982009 AND INTO THE GROOVE OF THE HAMMER 982032. PUSH LINK PIN 982041 REARWARDS AND WATCH IT SPRING BACK FORWARD TO MAKE SURE IT IS INSTALLED PROPERLY IN THE GROOVE OF HAMMER 982032.



#### **BOLT ASSEMBLY**

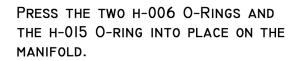


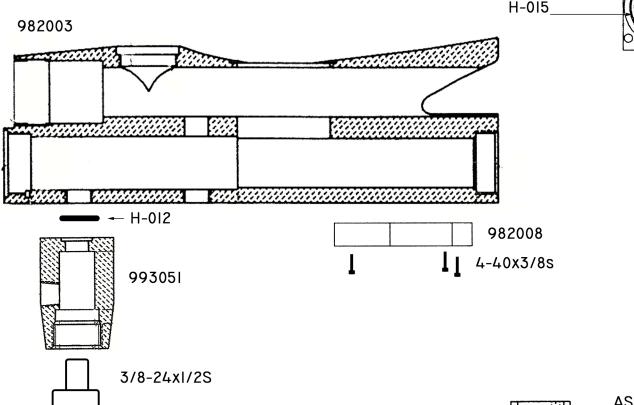
DROP THE D250HCB I/4 BALL BEARING INTO THE BACK OF THE BOLT 982009. DROP THE SPRING 964073 INTO THE BACK OF 982009. APPLY A SMALL DAB OF RED LOCTITE TO THE THREADS OF THE 5/I6-24xI/2 SET SCREW AND SCREW INTO BACK OF BOLT 982009. USE LINK PIN 982041 AND PUSH THROUGH SLOT TO GAUGE THE SPRING TENSION ON THE BACK OF BALL BEARING. ADJUST THE SET SCREW IN UNTIL PRESSURE IS FIRM ENOUGH TO SUFFICIENTLY HOLD LINK PIN 982041 INTO PLACE, BUT LINK PIN CAN STILL BE REMOVED WITHOUT DIFFICULTY. WHEN INSTALLING THE BOLT IN THE UPPER RECEIVER, THE AIR PASSAGE HOLE MUST FACE DOWN AND BE SURE THE LINK PIN 982041 IS POSITION PROPERLY TO BE INSERTED INTO GROOVE OF HAMMER 982032.



#### MANIFOLD AND ASA ADAPTOR

H-006

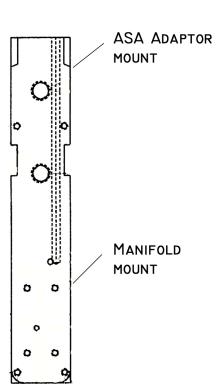




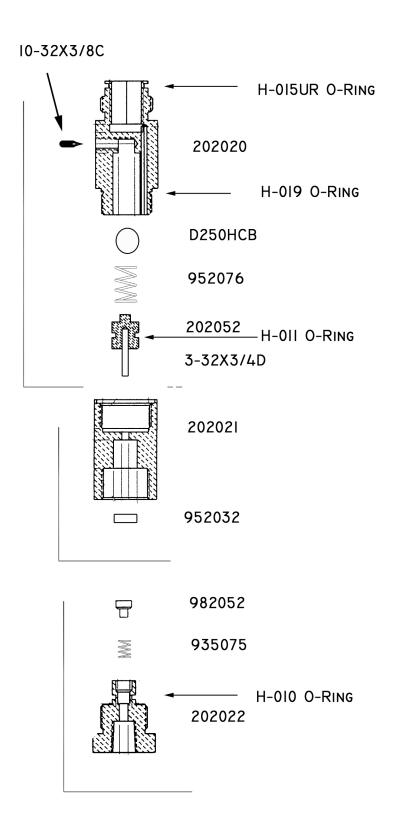
WITH THE O-RINGS ON THE MANIFOLD FACING UP, LINE UP THE HOLES ON THE BOTTOM OF THE UPPER RECEIVER 982003 WITH THE HOLES IN THE MANIFOLD 982008 AND SCREW IN THE FOUR 4-40x3/8 SOCKET HEAD CAP SCREWS.

WRAP A THIN LAYER OF THREAD TAPE AROUND THE THREADS OF THE D700 LPG GAUGE. SCREW THE GAUGE INTO THE I/8 NPTF HOLE ON THE ASA ADAPTOR 993051.

NEXT, DRILL THROUGH THE CENTER OF THE 3/8-24XI/2 SOCKET HEAD CAP SCREW. DEBURR AND CLEAN. SLIDE THE 3/8 SCREW THROUGH THE CENTER OF THE ASA ADAPTOR 99305I AND SLIDE THE H-012 O-RING OVER THE THREADS ON THE OTHER SIDE. SCREW THE ASA ADAPTOR TO THE UPPER RECEIVER 982003, MAKING SURE THAT THE GAUGE IS ON THE LEFT HAND SIDE OF THE GUN. WHEN THE HP REGULATOR IS FINISHED, IT CAN BE SCREWED INTO THE ADAPTOR.



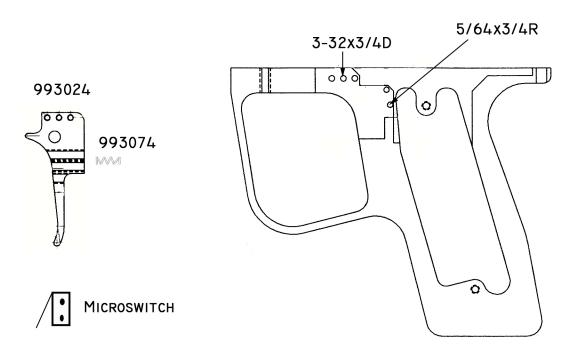
#### HIGH PRESSURE REGULATOR ASSEMBLY



PRESS THE 3/32 DOWEL PIN INTO THE PLUNGER 202052. MAKE SURE THE PIN IS STRAIGHT AND THE PIN HAS AN OVERALL LENGTH OF 0.898 IN. PLACE ALL O-RINGS ON DESIGNATED PIECES. IN PART 202020, SCREW 10-32x3/8C SCREW INTO THE THREADED HOLE ON THE SIDE AND DROP D250HCB INTO BOTTOM, THEN MAIN SPRING 952076. LUBRICATE O-RING ON PLUNGER 202052 LIBERALLY WITH DOW 33 CLEAR LITHIUM GREASE AND PUSH PLUNGER INTO BOTTOM OF 202020, MAKING SURE THAT SPRING UNDERNEATH IS NOT COCKED SIDEWAYS. ASSEMBLE 202022 BY CAREFULLY INSERTING SPRING 935075 AND PLACING CUP 982052 ON TOP WITH THE CUP SECTION FACING UP. DROP 952032 INTO PART NUMBER 202021 AND PRESS LIGHTY INTO PLACE WITH SOMETHING THAT WONT DAMAGE THE SEAL. SCREW 202022 INTO BOTTOM OF 202021. MAKING SURE THAT 202022 DOES NOT TILT TO DISTURB CUP, AND ALSO MAKE SURE THAT 952032 DOES NOT FALL OUT OF 202021. ONCE SCREWED TOGETHER, USE VERY SMALL ALLEN WRENCH AND PUSH DOWN INTO HOLE ON TOP OF 202021 AND MAKE SURE CUP 982052 BOUNCES FREELY UP AND DOWN. THEN SCREW 202020 AND 202021 TOGETHER. TIGHTEN ONE 90 DEGREE SWIVEL MACROLINE ELBOW INTO BOTTOM OF 202022.

# TRIGGER AND GRIP ASSEMBLY

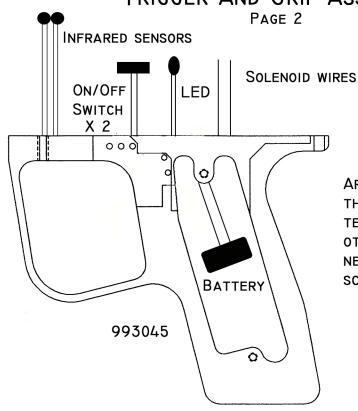
8-32xI/2S 8-32xI/4S 8-32xI/4S APPLY A SMALL DAB OF BLUE LOCTITIE TO EACH SCREW. SCREW THE 8-32XI/2 SET SCREW IN FROM FRONT UNTIL IT JUST BARELY POKES OUT THE BACK. SCREW THE MIDDLE 8-32XI/4 SET SCREW IN FROM THE FRONT UNTIL FLUSH. SCREW THE BOTTOM 8-32XI/4 SET SCREW IN UNTIL ABOUT FLUSH IN THE BACK OF THE TRIGGER 993024.



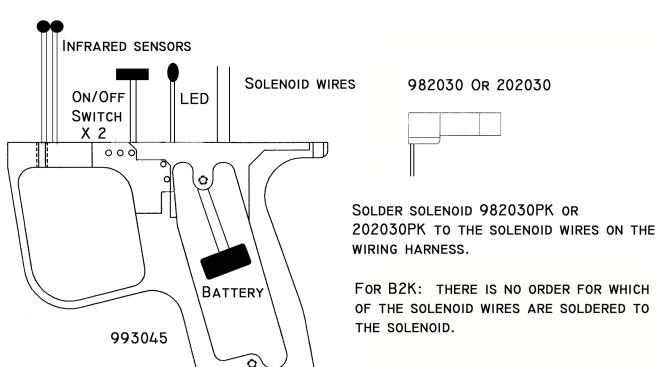
PLACE TRIGGER SPRING 993074 IN MIDDLE HOLE OF TRIGGER 993024 HOLES, IN THE BACK BEHIND THE SCREW. SLIDE TRIGGER INTO GRIP FRAME 993045. LINE UP HOLES ON TOP OF TRIGGER 993024 WITH HOLES ON TOP OF GRIP FRAME 993045. SCREW TWO 8-32XI/4 SET SCREWS INTO THREADED HOLES ON TOP SIDE OF TRIGGER FRAME THREE HOLES, SO THAT THEY HOLD THE DOWEL PIN IN PLACE. USING A GUIDE PIN, HOLD MIDDLE HOLES IN ALIGNMENT. PRESS 3-32X3/4 DOWEL PIN INTO CENTER HOLE OF GRIP FRAME 993045, AND THROUGH TRIGGER HOLE.

NEXT, PUT WIRING HARNESS IN GRIP BY PLACING MICROSWITCH BEHIND TRIGGER WITH THE LEVER PART FACING DOWN AND TOWARDS THE TRIGGER. USE GUIDE PINS TO HOLD THE MICROSWITCH HOLES AND GRIP FRAME HOLES IN ALIGNMENT. PRESS 5/64X3/4 ROLL PINS INTO THE HOLES.

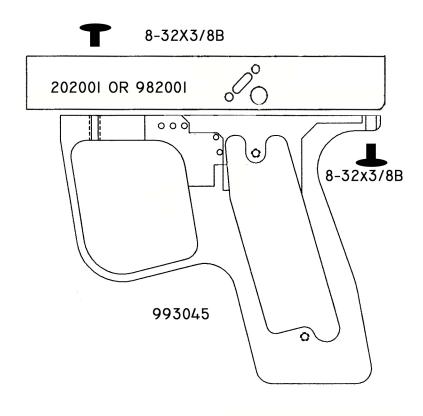
#### TRIGGER AND GRIP ASSEMBLY FOR PDS



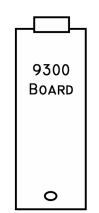
ARRANGE THE WIRING HARNESS WIRES SO THAT THE BATTERY CONNECTION AND BOARD TERMINAL REST INSIDE THE GRIP AND ALL OTHERS FACE UP OUTSIDE THE GRIP. IF NECESSARY, THREAD THE ON/OFF SWITCH SCREW HOLES WITH A 3-48 TAP.



## TRIGGER AND GRIP ASSEMBLY



PULL THE WIRES THROUGH THE CENTER OF THE TRAY 982001 OR 202001 AND THEN SCREW THE TRAY TO THE GRIP FRAME 993045 WITH TWO 8-32x3/8 BUTTONHEAD SCREWS. MAKE SURE SCREWS ARE TIGHT. THEN INSTALL THE LED INTO THE TRAY BY PUTTING THE BLACK COVER ON THE OUTSIDE AND PUSHING THE LED THROUGH THE BACK TO BE PINNED BY THE BLACK COVER. USING TWO 3-48X3/16 PAN HEAD PHILLIPS MACHINE SCREWS, INSTALL THE ON/OFF SWITCH. LEAVE THE SOLENOID LAYING IN THE TRAY UNTIL TIME TO SCREW IT TO THE MANIFOLD.



**T** 6-32x1/4B **T** 6-32x3/8B

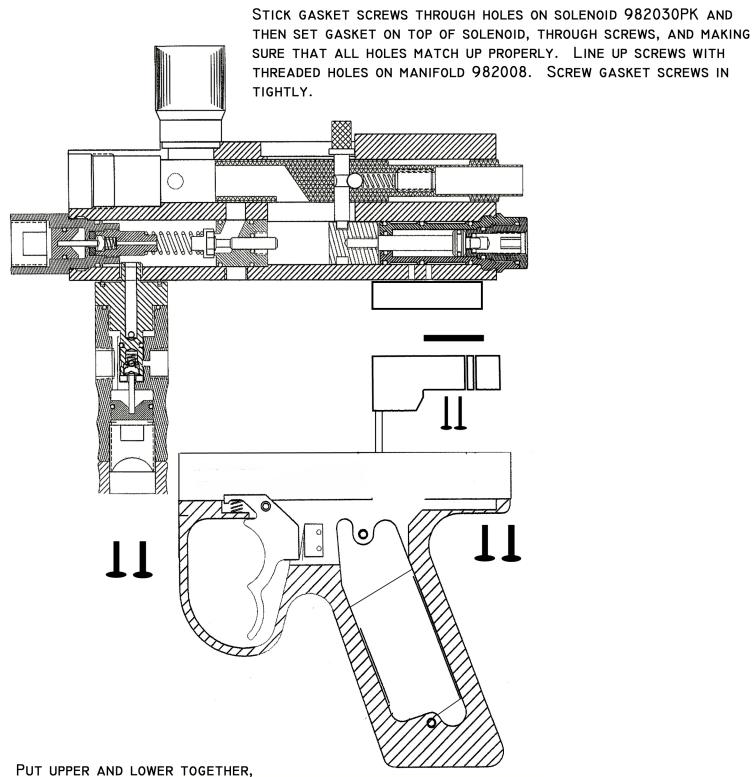
PLUG BOARD INTO WIRING HARNESS FROM BACK SIDE OF GRIP FRAME 993045, MAKING SURE THAT IT IS NOT PLUGGED IN BACKWARDS. PUT THE RIGHT GRIP PANEL ON AND SCREW TH

BACKWARDS. PUT THE RIGHT GRIP PANEL ON AND SCREW THE 6-32XI/4 BUTTONHEAD SCREW IN THE TOP, AND A 6-32X3/8 BUTTONHEAD SCREW IN THE BOTTOM, GOING THROUGH THE PANEL AND THE SMALL HOLE AT THE BOTTOM OF THE BOARD.

THIS SECURES AND GROUNDS THE BOARD.

NOTE: PIN #7 IS REMOVED ON THE BOARD AND PIN HOLE #7 ON CONNECTOR HAS A PLUG INSERTED. THESE MUST MATCH UP OR THE BOARD IS INSTALLED BACKWARDS.

#### FINAL ASSEMBLY OF B2K UPPER AND LOWER RECEIVER



MAKING SURE THAT ALL WIRES ARE NOT PINCHED AND ARE SECURE. THERE SHOULD BE NO WIRES BETWEEN THE MICROSWITCH AND SOLENOID WHEN PUT TOGETHER. SCREW IN THE FOUR 6-32XI SOCKET CAP SCREWS. AFTER TESTING, THE FRONT GRIP PANEL CAN BE PUT ON WITH TWO 6-32XI/4 BUTTONHEAD SCREWS.

#### **Testing Instructions:**

Screw in barrel 202010 and make sure the barrel threads in smoothly. Connect battery to the battery terminal inside grip. Air up marker with regulated 850 p.s.i. compressed air or nitrogen. Set high pressure regulator to 225 p.s.i. by screwing in adjustment screw on side of regulator. Turn on marker. Adjust low pressure regulator to about 90 p.s.i. by screwing in adjustment screw until you hear a small leak from the back of the marker and then unscrewing it ½ turn. Shoot a batch of paint and continue to adjust low pressure regulator until the marker shoots at about 280 fps. Continue shooting and notice any irregularities in regulated pressure or velocity. If there are any irregularities, the marker is not good. Check for leaks around all seals and listen down feed tube while not shooting for any valve leaks. Listen in the back of marker while not shooting for any solenoid leaks. If there are any leaks, marker is not good. Verify that all screws and parts are screwed on tight. Make minor adjustments to trigger screws if necessary for contacting microswitch. Shoot marker fast and watch bolt to make sure it springs back properly and keeps up with the speed of marker. Watch regulator and ensure that it is recovering fast enough. Rest marker for a period and then begin shooting again. Verify that the regulators do not climb or drop in pressure. If they do, marker is not good. Turn off air supply. Wait for a period and then turn air supply back on. Make sure regulators climb back to previous set pressures and that they do not climb or drop in pressure. Recheck for leaks and shoot again. If it the marker is satisfactory, turn off air supply and power source. Disconnect battery and attach left side panel. Clean entire outside of marker and inspect for satisfactory finish. Unscrew barrel and package marker with barrel, manual, and a kit containing the additional 90 degree swivel ¼ inch macroline elbow, 5 inches of macroline hose, and a 5/64 and 3/32 allen wrench. Close and seal package and label accordingly.

### Indian Creek Design B2K

Part No.	Item Description	Qty per marker
9300	Board	1
203010	Barrel	1
202020	HP Reg Upper Body	1
202021	HP Reg Middle Body	1
202022	HP Reg Cup Housing	1
202052	HP Regulator Piston	1
202073	Valve Spring	1
964073	Bolt Retention Spring	1
982001	Lower Receiver/Tray	1
982003	Upper Receiver	1
982006	Feed Tube	1
982008	Manifold	1
982009	Bolt	1
982028	Valve Cup	1
982029	Valve Pin	1
982030	Valve Seat	1
982032	Hammer	1
982033	Cylinder Piston	1
982034	Cylinder Body	1
982035	Cylinder End Cap	1
982036	Cylinder Piston Spring Guide	1
982041	Link Pin	1
982053	LP Regulator Piston	1
982054	LP Regulator Body	1
982055	LP Cup Housing	1
982056	LP Adjustment Screw	1
982071	B2K Main Spring	1
993024	Trigger	1
993045	Grip Frame	1
993051	ASA Adaptor	1
993074	Trigger Spring	1
10-32x3/8C	10-32x3/8 Cone Point Set Screw	1
3/8-24x1/2S	3/8-24x1/2 Socket Head Cap Screw	1
3/8-24x1/4S	3/8-24x1/4 Set Screw	1
3-32x5/8D	3-32x5/8 Dowel Pin	1
5/16-24x1/2S	5/16-24x1/2 Set Screw	1
6-32x3/8B	6-32x3/8 Buttonhead	1

8-32x1/2S	8-32x1/2 Set Screw	1
982030PK		1
	Four Way Solenoid Valve	1
982030PKG	Solenoid Gasket	1
D1/4MACROHOSE	1/4" Macroline Hose	1
302030	Valve Seal	1
D700LPG	700 p.s.i. Gauge	1
DGRIP-SL	Left Grip Panel	1
DGRIP-SR	Right Grip Panel	1
HAR-101	Wiring Harness	1
935075	Regulator Cup Spring	2
952076	Regulator Main Spring	2
982052	Regulator Cup	2
992006	Ball Detent	2
3-32x3/4D	3-32x3/4 Dowel Pin	2
3-48x3/16P	3-48x3/16 Pan Head Phillips Machine Screw	2
5/64x3/4R	5/64x3/4 Roll Pin	2
8-32x3/8B	8-32x3/8 Buttonhead	2
D1/4MACRO90SW	1/4" Macroline fitting, 90 Swivel	2
D250HCB	1/4 Chrome ball bearing	2
952032	Regulator Seal	2
H-010	H-010 BN70 O-Ring	2
H-010UR	H-010 UR90 O-Ring	2
H-011	H-011 BN70 O-Ring	2
H-012	H-012 BN70 O-Ring	2
H-015UR	H-015 UR90 O-Ring	2
H-016	H-016 BN70 O-Ring	2
H-019	H-019 BN70 O-Ring	2
8-32x1/4S	8-32x1/4 Set Screw	3
H-006	H-006 BN70 O-Ring	3
4-40x3/8S	4-40x3/8 Socket Head Cap Screw	4
6-32x1	6-32x1 Socket Head Cap Screw	4
6-32x1/4B	6-32x1/4 Buttonhead	5
H-015	H-015 BN70 O-Ring	6