

Impet, Inc.& Bowers Enterprise
911 Dorsey St.

Quote 172606
Date 06/26/2017

Gainesville, GA. 30501

Nissei ASB 650 EX III H 1993 Serial #189A4565 460 Volts

Including the following options:

Day light 510

Screw: 84 mm.

Lip cavity protection

Preform counter

Leveling pads

Blow molds lock ready

Blow Core Hold ready

Touch Switch ready

Spacer under injection unit

New Industrial Indexing Systems Servo Drive for Table rotation

Remove Upper base & rotation table: For modification: to run 8 cavities @ 70 mm

General Machine:

2.02 Install ANSI approved door safety circuit on all machine doors. Protection system should utilize multi-channel magnetic coded switches for redundancy and diagnostics. Door status should be indicated on the HMI.

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Injection Unit

New Barrel, Screw & Check ring (double flight)

New Heater bands (11) Nissei brand

Inspect injection cylinder and install rebuild kit, bearing & re-chrome piston (or replace); excessive chrome or scoring would require replacement. See general notes on cylinder testing.

3.04 Inspect carriage cylinder and install rebuild kit & re-chrome piston (or replace); excessive chrome or scoring would require replacement.

3.05 Inspect carriage bed (slide); clean and stone surfaces, replace if failed inspect. No more than .003 inch out of flatness.

3.07 Clean out T/C wells and ensure all T/C's are well seated.

3.08 **hydraulic screw motor:** Inspect, replace seal.

Injection Clamps:

4.00 Rebuild Upper clamp cylinders; replace all seals and re chrome pistons; excessive chrome or scoring would require replacement. Check for stress cracks using ultrasonic or magnaflux equipment.

4.01 **Re Chrome** (2) tie bars with nuts must be marked with paint pen to allow maintenance workers to detect movement of tie bar or nuts.

4.02 Replace all tie bar bushings Upper/Lower (6).

4.03 **Inspect** the connecting rod assembly that clamps the hot runner and inject mold together.

4.04 New Lower mold cylinder: casting, piston, top & bottom cover \$40 K.

Replace: Tie bars & Upper cylinders piston: nuts with Super Nut. (4)

Rotation System - Servo drive:

5.00 Check rotation table for straightness; straighten if required to within .010 inches TIR.

5.01 **Replace** lock pin bushings (4).

5.02 **Replace** rotation plate support thrust bearing.

5.03 Inspect gear box and replace oil. Oil drained from gearbox requires testing and report issued.

Pneumatic: High and low pressure air systems

6.01 Replace all air cylinders: heat pot, cond. core, eject, blow core. And for stretch SMC brand (double shaft cylinder helps on process).

Rebuild: Lock Pin, Blow Core hold cylinders

6.02 Replace Blow valves Primary AV 7, secondary AV 8 Asco & Exhausts AV 10 Lucifer check valves.

6.03 Rebuild: Primary air regulator with a Hale Hamilton regulator, inspect check valves and replace if needed. 600 psi liquid filled gauge to be supplied.

6.04 Replace LP operating air valves w/ Rexroth Ceramic air valves, new hoses, wiring, and fittings mounted on a common manifold block.

Conditioning Station:

7.00 **Replace** heat core guide bushings and re Chrome tie bars.

7.01 Inspect and rebuild the heat pot movable base guide frame and assembly.

Blow Station:

8.00 Refurbish the blow core and stretch rod ways; the ways must be flat within .005 inch along their length.

8.01 Inspect and re chrome stretch rod movable guide rods

8.02 Inspect bottom mold cylinder unit and rebuild.

8.03 Inspect blow mold platens making sure they are seated correctly, square and perpendicular, with no more than .005 depth variation within the four clamp cylinder pockets. Clean all water passages. Reset center lines on blow clamp during rebuild

8.04 Replace blow platen bolts (Unbrako) and wear pads (4).

8.05 Rebuild or replace blow clamp cylinders, re-chrome piston, remove Excessive chrome or scoring would require replacement. Piston and cylinder must be rebuilt to Nissei (OEM) standards.

Eject Station:

9.00 **Replace** eject guide bushings, Re Chrome tie bars, and replace oil cups.

9.01 Refurbish the eject guide rod ways; the ways must be flat within .005 inch along their length.

Electrical

10.03 Replace broken or missing switch name plates.

- 10.04 All switches and electrical panel identification tags must be white plastic with black lettering.
- 10.05 Clean all electrical cabinets and dress wiring for proper fit.
- 10.06 All wiring to be neatly identified and marked; inserted into wire troughs and covered.
- 10.07 Verify all machine and mold safeties are functioning properly.
- 10.08 Paint inside electric cabinets with white nonconductive paint.
- 10.16 Add hydraulic low level machine safety tied back to PLC alarm screens with warnings for low level, oil temp and machine shut off options for minimal level & Temp.
- 10.17 Replace all mechanical Limit with Proximity switches.

PLC / CPU / HMI:

11.0de component system for machine using Automation Direct PAC3000 series (P3-550CPU).

11.01 PLC must have the following communications ports: (1) RS232 (RJ12), (1) RS-485 (3-wire terminal block), both supporting Modbus

11.02 Replace HMI with 10" or larger Maple Systems HMI color touch screen for operator interface. To be programmed for timer control, temperature, injection control (if applicable), recipes, complete sequence monitoring, manual maintenance functions, and dynamic alarm display and diagnostic.

11.03 HMI must be capable of storing machine process recipes, operation, and maintenance manuals.

plant, with all annotations saved to a CD for the plants reference, and also uploaded to a laptop computer for troubleshooting.

11.31 All internal components to be labeled with engraved tag, WHITE PLASTIC W/ BLACK PRINT, (minimum ½" in height). Components to include relays, terminal strips, push buttons, etc.

Hydraulics:

13.00 Clean and wiped down with lint free towels. Flush hydraulic tank. Remove and clean all magnets. Replace level gage.

13.01 Remove and clean & and Dip heat exchanger, replace gaskets, Zinc bars, and pressure test.

13.02 Change all hydraulic filters

13.03 **Electrical drive motor Toshiba for hydraulics** removed and rebuilt (tested, cleaned, refurbished, lubed and bearings replaced etc.) Complete breakdown of motor, tested, new bearings etc. back to OEM

standards. **Replace** chain coupling with elastomer / rubber coupling (**Magnaloy**).

13.04 Replace all cartridges pumps (4) Tokimec

13.05 Replace all hydraulic valve O-rings and seals.

13.06 Replace all hydraulic directional valves 24 Volts and wires with **LCH** and must maintain orifice sizes, and must be correct flow rate).

13.07 Replace all hydraulic hoses

Miscellaneous:

14.00 **Replace** all plastic windows with Polycarbonate (Lexan) on machine cage with 1/4 inch.

14.01 Paint machine enclosure and base paints matching original color as closely as possible or customer choice.

14.02 Attach manufacture warning signs, name tags for valves, cylinders, hoses etc.

14.04 Start up and final acceptance test of 12 hours of dry cycle run time of 95% efficient to machine rate with less than 2%, Shot plastic

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14.06 Updated parts books, schematics on paper and electronic format. Drawings should be in AutoCAD format ver 2011 or later.

14.07 Provide a parts list breakdown of all new valves, o rings, and hoses with size, material, etc.

14.10 Rebuild and upgrades will be completed within 8 weeks of receiving down payment of 50% of total cost.

14.11 Payment Terms: down payment to be \$132,50.00 The remaining sum of \$132.50 to be paid at machine acceptance in our facility.

Total Cost:\$265.000.00 US

FOB Gainesville

Impet, Inc.& Bowers Enterprise Warranty: We warrant the work completed in this rebuild & Upgrade for a period of six months from the date of shipment. Warranty does not extend to machine components not replaced and warranties

Replaced items shall in no case exceed original manufacturer's warranties.