Dyno Tech Machine

Snohomish, Wa
QUALITY CONTROL MANUAL

Rev. B – 2012

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Section 1

POLICY, ORGANIZATION AND PLANNING

1. The purpose of this Quality Control Manual is to outline and document an inspection system as specified herein.

2. Outlined policies and procedures address's inspection systems requirements pertaining to inspection which are necessary to substantiate product conformance to drawing, contract, specification, and purchase order requirements.

3. Quality Control Management is given the responsibility, by the President of Dyno-Tech, to review, implement and maintain inspection systems policy and procedures complying with customer's purchase order or contract requirement to assure product quality.

4. Quality Control Management is responsible for designating and assigning proper authority to Quality Control Personnel to assure implementation, maintaining, and control for outlined Quality Control Policies and Procedures.

5. Quality Control Management and assigned Quality Control Personnel have the authority and responsibility to obtain, review. docwnent, and control implementation ofin-house established workmanship standards and procedures pertaining to quality. inspection, and testing. They are further respo]lSible to plan, implement, and document, where necessary, the appropriate inspection and test procedures as outlined in this Quality Control Manual. This will assure tractability through documentation from the time when the purchase order or contract is awarded to the final phase when the product is manufactured, completed and shipped.

6. This Quality Control Manual, along with outlined policies and procedures, will be reviewed at least annually for current status and compliance to company policy. Results of this review will be recorded on the revision page and signed by the Quality Control Manager.

7. Described policies and procedures in this Quality Control Manual will be maintained I current and are available to all affected in-house personnel, government, and prime contractor representatives.

8. See Figure I for organizational responsibilities and reporting structure.

SECTION 2

DRAWING, SPECIFICATIONS, AND DOCUMENTS

1. Documents, specifications or documents furnished or approved by the customer shall be reviewed by the Quality Control Manager. They will be dated upon receipt and maintained in the customer's job work record file showing the customer's name, date received, drawing number and the latest revision number and other pertinent information as needed.

2. All drawings, specifications, and documents shall be controlled, implemented, and maintained by the Quality Control Department. Drawings, specifications and documents that are not returned to the customer at the completion of the contract, will be maintained with the customers job work record file.

3. Upon receipt of customer's documentation, the Quality Control Department shall review all characteristics and identify major and minor characteristics on the Shop Order. The Shop Order form shall identify all AQL level for each of the characteristics as well as any shipping, packaging or additional preservations needed to protect the customers hardware.

4. Changes initiated by the customer will be entered into the customer's databank and all copies of Shop Order form currently in work shall be updated to reflect the latest change. These changes may be added by "RED LINING" the current shop order or by issuing a new shop order, in which case the old Shop Order form shall be marked "OBSOLETE" at the time of issuance of a new revision. Shop orders marked OBSOLETE shall be maintained in the customer's job work record file.

5. Upon completion of the shop order, the Quality Control Department will file all related documents in the customers record file. All related documents shall remain on file for 10-years or as designated by the customer.

SECTION 3

PROCUREMENT and PROCESS CONTROL

1. When material or a process is purchased or contracted by Dyno-Tech, the purchase order shall request that a certification of compliance, when applicable, accompany the material or process being delivered. When material is ordered to an Industry Standard or MIL-spec., the purchase order shall specify the Industry Standard or MIL-spec that the material or process is being certified to.

2. The material and shipping documents shall be inspected against the purchase order requirements and all documents stamped by inspection as evidence of acceptance.

3. Raw material analysis will be performed only at customers request and shall be done by a customers approved source. If no approved source is specified, Quality Control shall select a source as specified in SECTION 9.

4. Material acceptance into stores shall be identified by purchase order number and shall stay with the material through the life of the material while at Dyno-Tech. Identification maybe by label, sticker or permanent ink marking.

5. Those materials whose physical properties may be degradable during storage shall have shelf life indicated on the container. These materials shall be issued on a “first-in, first-out” basis. These materials shall be inspected at the time of use to insure they are in current date of acceptance. Materials whose shelf life has expired shall be removed from production or stores and discarded.

6. Material certifications and/or test reports, as required, shall be filed and preserved by the Quality Control organization and made available to the customer upon request.

SECTION 4

NONCONFORMING MATERIALS AND CORRECTIVE ACTION

1. Materials that have been designated as nonconforming shall be identified and segregated from known good materials. Quality Control shall immediately document the nature of the defect on the Rejection Report and Rejection Report Log forms and present the documentation to the Quality Control Manager.

2. The Quality Control Manager shall investigate and confirm the nature and possible cause for the nonconformance and issue corrective action if warranted. Corrective action would be required but not limited to the following:

A. The cause ofthe nonconformance would delay delivery ofcustomers hardware.
B. The nonconformance was a second or more occurrence for the same cause or,
C. The nonconformance is by nature minor, where the defect does not materially affect the hardware and the cost would not warrant formal corrective action.

3. In the case of customer supplied material(s), the Quality Control Manager shall contact the customer and relay the nature of the nonconformance. In the case of customer caused nonconformance, no corrective action is required from Dyno-Tech. The date, time, and name of the individual contacted shall be recorded on the Rejection Report form.

4. Supplier caused nonconformance shall be investigated by the Quality Control Manager to determine if formal corrective action is warranted. Corrective action would be required following the guidelines in item 2 above.

5. Corrective action may consist of a documented phone call to the supplier, noting the date, time of the call, individual contacted, and the resulting action(s) taken. The information shall be documented on Supplier Corrective Action Response form.

6. Written request for corrective action shall be documented on Supplier Corrective Action Response form, when so determined by the Quality Control Manager, and shall be due within 20-working days.

7. Dyno-Tech reserves the right to "over produce" materials that are intended for machine and software set-up. This material, when so recorded on the shop order, shall not be subject to any MRB actions. This material may be shipped with the original quantities ordered.

8. All dispositions, Rework, Repair, Use-As-Is or Scrap, will be determined by the Quality Control Manager and entered on Rejection Report form, except in the case where the customer's hardware is affected. In these instances, customer MRB may be required. Repair and Use-As-Is dispositions are not allowable on customer's hardware

9. "In house" corrective action(s) maybe entered in the Rejection Report form investigation instruction column and shall follow the guidelines as described in item 2.

10. Rejected material(s) shall be stamped "R", using red ink if applicable. Parts to small shall have the labeling package stamped.

11. After the MRB action has been completed and customer and/or corrective action has been initiated, the triangle stamp black ink shall be placed next to the "R" stamp. The rejection report number shall be entered adjacent the triangle stamp

SECTION 5

INSPECTION PROCEDURES AND SHIPPING

Receiving Inspection

1. All shipments received will be inspected for compliance to drawing, specifications, and purchase order requirements and recorded in the Daily Receiving and Inspection Log form. At the completion and acceptance of the material, the documents shall be stamped and dated by Quality Control.

2. Records of all receive inspections and tests performed shall be maintained and filed in designated folders for tractability.

3. All items in the receiving area are physically and carefully separated into three categories:

A) Items awaiting receiving inspection or test results.

B) Items which have received, inspected and comply with drawing, specifications, and purchase order.

C) Items rejected and withheld, waiting for disposition.

First Article Inspection

1. Upon completion of a manufacturing set-up, the first item produced shall be submitted to Quality Control for First Article Inspection and recorded in the First Article Report form.

2. Should the first item manufactured and inspected fail to meet the drawing requirements, Quality Control shall notify the operator with a request for a change in the set-up and a new first article submitted.

3. No item shall go into production unless the first article inspection report is approved by Quality Control.

4. All first article inspection reports shall become a permanent record and shall be filed in the customers' job folder.

Final Inspection

1. Upon completion, all manufactured items shall be forwarded to Quality Control for final inspection.

2. All items shall be inspected to the AQL level as shown on the Shop Order and the results recorded. If the parts are rejected, Quality Control shall inspect all parts at 100% for the noted discrepancy.

3. If the purchase order or contract requires that individual parts to be stamped with the Quality Control stamp, and these parts are too small to be individually stamped, they shall be stamped on the packaging label the parts are shipped in.

4. All items found to be discrepant and do not comply with the drawing or specification shall be identified with a Rejection Report form. All rejected items shall be segregated from the balance of the lot inspected and placed in a segregated area for evaluation by the Quality Control Manager.

5. The Quality Control Manager may request customer involvement in an MRB action to determine if the parts are acceptable “AS IS”. In this instance, cause for the discrepancy and corrective action shall be submitted to the customer at the time of the requested MRB action if required by the customer. If the customer chooses to give the disposition over the phone, the disposition shall be recorded on the rejection tag, giving the name of the individual giving the disposition, the date, and time of the contact.

6. If the parts are not submitted to the customer and a new order made, a new shop order shall be released and will include a new first article requirement.

7. The parts that were rejected shall be investigated to determine the cause for the discrepancy and corrective action entered on the original Shop Order form if the cause can be determined. If the cause cannot be determined, the Quality Control Manager shall enter "the probable cause".

8. Quality Control shall verify that all manufacturing paper, including material certification, is retained in the customers job file.

<u>Packaging and Shipping</u>

1. After final inspection is completed, the parts shall be packaged, boxed or wrapped, in accordance with the instructions on the shop order.

2. Upon approval of the packaging, including all required test reports, Certification of Compliance, Material Certification (if required), and all other related and required documents, Quality Control shall stamp the Shop Order form allowing the parts to be shipped.

SECTION 6

STAMP CONTROL

1. Inspection stamps shall be issued and controlled by the Quality Control Manager to all personnel charged with inspection.

2. A record will be kept by the Quality Control Manager of inspection stamp numbers, the date of issuance, and identify the individual to whom it is issued.

3. Upon transfer or termination of the inspector, the stamp shall be returned to the Quality Control Manager before final clearance of the employee. An entry to this effect will be made in the Quality Control Stamp Log and dated. Returned stamps shall be placed "IN BOND" and will not be re-issued for a period of at least six months.

4. Lost or damaged stamps will be logged as such and a different stamp and number shall be issued. The stamp number lost or damaged shall not be re-issued for a period of at least six months

SECTION 7

CALIBRATION

1. All inspection equipment used for the acceptance of production or customers hardware Shall be maintained at accuracy levels sufficient to assure the confidence of Dyno-Tech's products to the required customers specification. Calibration shall be in accordance with the National Institute of Standards and Technology.

2. Measuring and test equipment used in product acceptance shall be calibrated at established intervals. Calibration intervals shall be based on area, operation, degree of usage and as specified by the manufacturer, as applicable.

3. Surface Plate, Height Gages, Check Pins, Gage Blocks, Jo Blocks, Test and Dial Indicators shall be calibrations by an approved out-side source, who will maintain the recall system. All other inspection equipment shall be calibrated by the Quality Control. The Quality Control Manager shall maintain a listing of all Dyno-Tech' s calibrated equipment and review periodically the listing to assure that all equipment is in current calibration.

4. Personally owned tools used for inspection acceptance shall be calibrated in the manner as prescribed for Dyno-Tech's equipment.

5. Inspection shall verify, at the time of inspection, that the inspection equipment is in current calibration and will note the same on the shop order form.

6. All of Dyno-Tech's tooling will be inspected at intervals, as specified by the Quality Control Manager, and a record maintained in the Tooling Log form. Customer Supplied tooling shall be inspected by Dyno-Tech, at customers request, and recorded on the Tooling Log form.

7. All in-house calibration inspection equipment shall be stickered giving the date of ,... calibration, due date of next calibration, control number, and stamped by Quality Control.

SECTION 8

TOOLING USED FOR INSPECTION

1. This procedure is applicable to all jigs, fixtures, tooling masters, templates, pattern and other devices used as a media of inspection and to the personnel who are responsible for use and care of these items.

2. All production tooling (used as a media of inspection), weather purchased or manufactured, will be inspected against the design requirements prior to release. Inspection records shall be established and recorded on the Tooling Log form and intervals established for future inspections. Special instructions (if required) will be prepared and all documents relating to each item of tooling filed with Quality Control. All tooling shall be assigned a tool number for identification and control purposes.

3. Subject tooling shall be inspected at intervals as established by the Quality Control Manager, using the design drawing and/or special instructions provided. Those items not meeting the specific requirements will be tagged using the Rejection Report form and submitted to the Quality Control Manager for disposition.

4. Accuracy of manufacturing tooling may be established by Quality Control of the item produced (tool proofing). Such equipment shall be stored in an environment to prevent damage or loss of accuracy.

SECTION 9

APPROVED SUPPLIERS AND PROCESSORS

1 Dyno-Tech will utilize the customers approved Suppliers/Processors list where this list exists.

2 In the event the customer does not have a list of approved Suppliers/Processors. Dyno-Tech will choose a Supplier/Processor based on any of the following: reputation, past history of use, Pre-award Quality Survey form, or customers' verbal or written recommendation. A list these suppliers and processors are shown on page 15.

SECTION 9 cont'd

APPROVED SUPPLIERS AND PROCESSOR

Automated Metal Technologies 15346 N.E. 92nd. St., Suite C Redmond, W A 98052

Applied Finishing 4216 Russel Rd. Mukilteo, W A 98275

Bearings Inc. 2922 W. Marine Dr. Everett, W A 98201

Cadillac Plastic
P.O. Box 100662 Pasadena, CA 91 189

D & D Welding Fabrication 4212 Russel Rd. Mukilteo, W A 98275

Hytek Finishes Co. 1515 75th. St. S.W., Suite 100 Everett, W A 98203

Harrford Tool 3117 139th. Ave. N.E. Lake Stevens, WA 98258

Magnetic Components 23145 Kashiwa Court Torrance, CA 90505

Metran Metal Finishers P.O. Box 667 Mukilteo, WA 98575

Mikes Machine 18932 66 Ave. NE, Unit A Arlington, WA 98223

Just In Time 19510 144th. Ave. NE E-7 Woodinville, WA 98072

Precision Screen Graphics 11627 Airport Rd., Suite L Everett, WA 98204

Professional Plastics 6412 S. 196th. St Kent, W A 98032

Olander Corp. 14612 NE 91st. St. Redmond, WA 98052

Stock Drive Products 2101 Jerricho Turnpike P.O. Box 5416 New Hyde Park, NY 11042

Production Plating 4412 Russel Rd. Mukilteo, WA 98275

T.M.X Tysen Division 22405 66th. Ave. South Kent, WA 98032

SECTION 10

EQUIPMENT LISTING

1 50 x 20 x 25 Haas U.M.C. with sub-tooling plate for dedicated tooling.

2 30 x 16 x 20 Haas U.M.C with rigid tapping s.ub-plates.

3 Hardinge H.N.C. Bar-feed lathe.

4 18 x 12 x 5 Bridgeport CNC.

5 2 Vertical Tooling Mill with digital read outs.

6 Tooling Cathe. Manual. Turret

7 Nakamura Tume TM.C 18 C.N.C cathe 10 x 11 cup.

Support Equipment, Tapping Heads, Boring Heads, Drill Presses, Grinders, Saws and etc. Inspection Equipment

1 24 x 36 Granite Surface Plate

2 12 in. & 24 in. Height Gages.

3 Check Pins, Gage Blocks, Jo Blocks, Test and Dial Indicators, 1 to 4 in. Mics 6 and 12 in. Calipers.

4 Many More Misc. Items. All under Calibration Control.

Dyno-Tech Machine
17816 Dubuque N.E.,
Snohomish, WA 98290
360-568-7023

DAILY RECEIVING & INSPECTION LOG

Date	Part Number	Customer P.O. Number	Name of Supplier Certification#/Heat#/Lot#	QTY. Ordered / QTY. Recieved	QTY. Accepted / QTY. Rejected	Type & Size of Material/Process	Sampling Inspection No____ Yes____ AQL%	Sampling Inspection No____ Yes____ 100%	INSPECT STAMP	Rejection Report No.

All incoming material certification shall be checked against customers drawings requirements.

Dyno-Tech Machine 17816 Dubuque Road, Snohomish, WA 98290 **FIRST ARTICLE INSPECTION**	PURCHASE ORDER:	PART NO.:	REV:
	DATE:	PART NAME:	

LOT QUANTITY:

DIMENSION	TOLERANCE	ACTUAL MEASUREMENT	PASS/ FAIL	INSP. BY	COMMENTS

QUALITY ASSURANCE REVIEW:

Dyno-Tech Machine

17816 Dubuque Road, Snohomish, WA 98290

PREAWARD QUALITY SURVEY

Company Name: _____

Street Address: _____ City: _____

State/Zip Code: _____/_____/_____, _____-_____ Phone: _____

President or General Manager: _____

Quality Control Manager: _____

Years in Business: _____ Number of Employees: _____ Number of Inspectors _____

Principal Products or Services: _____

	YES	NO
1. Do you have a Quality Control Manual?	____	____
2. Will you supply certificates of conformance with all shipments? Including mechanical, chemical and physical property analysis: If required?	____	____
3. Does your Inspection Quality system comply with:		
a. MIL-1-45208A, Inspection System Requirements	____	____
b. MIL-STD-105D, Sampling Inspection by Attributes	____	____
4. Does your calibration system comply with standards traceable to NIST?	____	____
5. Does your company carry product liability insurance?	____	____

If yes: Insurer: _____ Limits: $_____

Policy No.: _____ Expires: _____

6. Have other companies or Government agencies approved your Quality Inspection system?

If yes: Company or Government Agency	Date of Approval
_____	_____
_____	_____
_____	_____

I HEREBY CERTIFY THE INFORMATION DOCUMENTED ON THS QUESTIONNAIRE TO BE COMPLETE AND ACCURATE AT THIS TIME.

_____ _____ _____

Authorizing Signature | Title | Date

Date sent to supplier: _____ Date received: _____

Approved: Yes _____ No _____ By: _____ Date: _____

Follow-up notes: _____

Final Approvals: _____ _____ _____

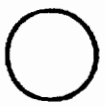
Authorizing Signature | Title | Date

QUALITY CONTROL STAMP LOG

Numbered inspection stamps shall be assigned to all quality control personnel. These stamps shall be safeguarded at all times and their loss reported immediately to Q.C. Manager.

Should a stamp be lost or an employee who has been assigned a stamp been terminated, the complete set of stamps shall be withdrawn from use and not reissued for a period of six (6) months.

The configuration of stamps used are shown below:

ACCEPTANCE STAMP 

REJECTION STAMP 

TRIANGLE STAMP 

Inventory of Inspection Stamps:

Acceptance Stamp ( )
Rejection Stamp ( )
Triangle Stamp ( )

Assigned to the following personnel:

		NAME	DATE ISSUED	DATE RETURNED
Q.C. Manager	# ( )			
Inspector:	# ( )			
Inspector:	# ( )			
Inspector:	# ( )			
Inspector:	# ( )			

Individual Inspection Stamps that are lost or withdrawn shall be recorded and controlled as follows:

Type of Stamp:	Number of Stamps:	Name of Stamp Holder:	Date Returned:	Date Lost:	Comments:

Dyno-Tech Machine
17816 Dubuque N. E.
Snohomish, WA 98290
(360) 568-7023

REJECTION REPORT

Part No. _____
Rejection Report No._____
Date: _____

A. DESCREPANCY:

B. INVESTIGATION AND REMARKS:

C. DISPOSITION: Scrap_____ Use As Is _____ Rework _____ RTV _____

D. CORRECTIVE ACTION: Supplier_____ Dyno-Tech _____

Signature: _____ _____
Quality Assurance Manager Date

Dyno-Tech Machine
17816 Dubuque N.E.,
Snohomish, WA 98290
360-568-7023

REJECTION REPORT - LOG

Rejection Report No.	Part No.	Part Name	Quantity Rejected	MRB ACTION TAKEN:			Name & Date of Inspector	P.O. # Comments
				Rework	Use As Is	Scrap		

DYNO-TECH MACHINE

SHOP ORDER

SHEET _____ OF _____

PART NUMBER	REV	MATERIALS	WORK ORDER	QTY	ISSUE	
PART NAME	DRAWING		DUE DATE	APPROVED BY		DA
PROGRAM	CUSTOMER P.O.		COMPLETION DATE	ME		
NEXT ASSEMBLY	EFFECTIVITY		INSP. STAMP	QE		

OPER. NO.	WORK CENTER	SET-UP	STD. HRS/100	PROCESS INSTRUCTIONS	OPER.	QTY. ACC.	DATE	INSP.	REMARKS

SINGLE SAMPLING INSPECTION

LOT SIZE	2.5% AQL			6.5% AQL		
	SAMPLE SIZE	ACC	REJ	SAMPLE SIZE	ACC	REJ
2 TO 15	3	0	1	2	0	1
16 TO 25	5	0	1	3	0	2
26 TO 50	8	0	1	5	1	3
51 TO 90	13	1	2	8	1	4
91 TO 150	20	1	2	13	2	5
151 TO 280	32	2	3	20	3	6
281 TO 500	50	3	4	32	5	8
501 TO 1200	80	5	6	50	7	10
1201 TO 3200	125	7	8	80	10	13
3201 TO 10,000	200	10	11	125	10	13

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PURCHASE ORDER NO. _____

PART NO. _____

SUPPLIER CORRECTIVE ACTION RESPONSE

A) INVESTIGATION AND REMARKS:

B) CORRECTIVE ACTION:

C) EFFECTIVITY: _____ (DATE) OR _____ (SERIAL NO.)

D) ACTIONS TO PREVENT RECURRENCE:

SIGNATURE: _____ (VENDOR Q.A. REPRESENTATIVE) _____ (DATE)

COMPANY: _____

TOOLING LOG

	Tooling P/N	Used for P/N	Qty	Rec'd	Ret.