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**0. Revision History**

Z) 26FEB2010 – Annual rescore, remove Detroit Diameters, JES, Kleen Kut, Sheldon, Primary Instrument & Pennoyer Dodge for lack of use, add H&R for Moog, add Interface Weld for Parker HSD, reinstate Barry Ave. for Cameron and Omni for Eaton Ground Fuel, add Moog to Embee.

Y) 11DEC2009 – Removed Aremac, Carlton and Steel Ind. for lack of use

X) 23NOV2009 – Added Yarde Metals

W) 23OCT2009 – Added International Metal Source and removed Pacific Coast Metal’s probationary status.

Written By: Kevin Ferris	Date: 26FEB2010
Approved By: Kevin Ferris	Date: 26FEB2010
Approved By: Brent Melkesian	Date: 26FEB2010
Affirmed By: N/A	Date: N/A



**1. Purpose**

The purpose of this work instruction is to provide for guidance and a system for selecting suppliers to perform contracted work.

**2. Application**

This work instruction applies to all purchasing employees, as well as to all sub-tier suppliers of Melkes Precision Products.

**3. References**

- 1) *OP 00-00 – Quality Manual*

**4. Procedure**

All suppliers listed herein have been approved for use by Melkes Machine in accordance with the Quality Manual. The suppliers name, what they are approved to do (scope), method of original or continuing approval (Probationary, Melkes = approved after probation (or grandfathered and maintaining approval by quality delivered) or the customers’ names that have approved them for special processes) and a rating score.

The rating is from 2-10, 10 being best. This rating is a composite of the company’s customer service and quality as it has been demonstrated to Melkes Machine in the past. New suppliers to Melkes Precision Products will have a score of “N” and will be italicized, suppliers that were largely unused will have their score underlined.

Supplier	Scope of approval	Approval Method	Score
<b>4.1 Anodize</b>			
Electron Plating III 1509.....	Type I, II & III .....	Eaton GF .....	9
Jan-Kens 0005.....	Type I & II only .....	Eaton GF, Eaton Steerer .....	9
		GE-Yak, Parker A&F, Parker HSD	
Embee 0072 .....	Type I, II & III .....	Eaton GF, Eaton Steerer .....	8
		GE-Yak, Parker A&F, Parker HSD, Moog	
<i>Omni Metal Finishing 0760...</i>	<i>Type I, II &amp; III.....</i>	<i>Eaton GF.....</i>	<i>N</i>
<b>4.2 Assembly</b>			
Amer. Prec. Hyd. 1134 .....	Press & Swage .....	GE-Y, Parker.....	<u>10</u>
R & R 0314 .....	Thread Inserts.....	Melkes.....	<u>9</u>
Marking Methods 0101 .....	Chem-Etch .....	Melkes.....	8
<b>4.3 Calibration</b>			
Accu-Gage 0097 .....	Thread Gages .....	Melkes.....	10
Cal-Labs 0139.....	Blocks & Rings.....	Melkes.....	10
Precision Instrument 1488 .....	Temp/Hum Probe.....	Melkes.....	10



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JPL .....Thread Gages .....Melkes..... 9  
 H. Morgan Co. 1539 .....CMM.....Melkes..... 8  
 Precision Granite 0524.....Surface Plates.....Melkes..... 8

4.4 Cleaning

None at this time

4.5 Deburr

I&I Deburr 0148 .....Deburr, Blend.....Melkes..... 10  
 Ultrasonic Deburr 0007.....Deburr, Re-facing .....Melkes..... 8

4.6 Destructive Testing

Stork 0483 .....Metallurgy, Tensile, ...Melkes (Mat'l Verification) 10  
 Stress/Corrosion

4.7 EDM

*H&R Precision 1715.....EDM.....Moog..... N*

4.8 Grinding

Form Grind 0723.....OD/ ID Grinding .....Melkes..... 10  
 Long Bar Grinding 1643 .....OD Grinding .....Probation..... 9  
 Embee 0072 .....OD/ID Grinding .....Melkes..... 8

4.9 Heat Treating

Bodycote 0038 .....Steel Treating .....Eaton GF, Eaton Steerer ..... 9  
 GE-Yak, Parker A&F,  
 Parker HSD, Moog  
 Certified Steel 1690 .....Steel Treating .....GE-Y (Boeing), Parker, ..... 9  
 Eaton GF  
 Bodycote 1097 .....Aluminum .....Eaton GF, Eaton Steerer ..... 8  
 GE-Yak, Parker A&F,  
 Parker HSD

4.10 Hone

D-N-R 0315 .....Small shallow only.....Melkes..... 10  
 JTR 0281 .....Standard Hone.....Melkes..... 9  
 Robert's Gun Drill 1619 .....Gun Drill .....Melkes..... 9

4.11 Laser Cut

None at this time



4.12 Machining

Robert's Gun Drill 1619 .....Gun Drill .....Melkes..... 9

4.13 NDT

GTI 1492.....PEN & MAG.....Eaton Steerer, GE-Yak..... 10  
Parker A&F, Parker HSD

Stork 0483.....PASS, PEN & MAG..Eaton GF, Eaton Steerer ..... 10  
GE-Yak, Parker A&F,  
Parker HSD

Jan-Kens 0005.....PASS, PEN & MAG..Eaton GF, Eaton Steerer ..... 9  
GE-Yak, Parker A&F,  
Parker HSD

Embee 0072 .....PASS, PEN & MAG..Eaton GF, Eaton Steerer ..... 8  
GE-Yak, Parker A&F,  
Parker HSD, Moog

4.14 Plating & Painting

ND Industries 1640 .....Thread Locking.....Eaton GF ..... 10

Electron Plating III 1509.....Passivate, Ni.....Eaton GF ..... 10

Thermech Corporation 1647..Teflon Plating.....Eaton GF ..... 9

E/M Corp 0040 .....Dry Film.....Parker A&F, Parker HSD ... 9

Electrolyzing Inc 1124.....Chrome.....Eaton Steerer, GE-Yak..... 8  
Parker A&F, Parker HSD

Embee 0072 .....Cr, Ni, Cad, Paint.....Eaton GF, Eaton Steerer ..... 8  
GE-Yak, Parker A&F,  
Parker HSD, Moog

Jesse's Plating 1696 .....Cad .....Cameron..... 7

Barry Ave. 0173 .....Passivate .....Cameron..... N

4.15 Polish

D-N-R 0315 .....Diametric Features .....Melkes..... 10

JTR 0281 .....Bores .....Melkes..... 9

Ultrasonic Deburr 0007.....Faces & Flats.....Melkes..... 8

4.16 Raw Materials

Tube Service Co. 0131.....Tube .....Melkes..... 9

Fry Steel 0114.....Aluminum & Steel .....Melkes..... 9

TW Metals 0130 .....Steel.....Melkes, Moog ..... 9

American Int'l 1592.....Steel Tube .....Melkes..... 9

Jacquet West 1692 .....Aluminum .....Probationary ..... 9

EMJ 0122 .....Steel & Aluminum .....Melkes..... 9

Ryerson 0115 .....Steel.....Melkes..... 8

Bralco 0113 .....Aluminum .....Melkes..... 8

Castle Metals 0141.....Aluminum .....Melkes..... 8

Industrial Metal 0979.....Steel.....Melkes..... 8



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Sierra Alloys 0699 .....	Steel.....	Melkes.....	<u>8</u>
Coastal Metals 1703.....	Steel.....	Probationary.....	<u>8</u>
Int'l Metal Source 1710 .....	4xxx tube.....	Probationary.....	<u>8</u>
Pacific Coast Metals 1694 .....	Steel.....	Melkes.....	<u>8</u>
Copper & Brass 0171 .....	Copper, Brass,.....	Melkes.....	<u>7</u>
Aluminum & Steel			
Aluminum Precision 1523 .....	Foundry.....	Parker, GE.....	<u>7</u>
Service Steel Aero 1455.....	Steel.....	Melkes.....	<u>7</u>
ALCAST Foundry 1674 .....	Foundry.....	Eaton GF.....	<u>7</u>
Sunshine Metals 1704 .....	Aluminum.....	Probationary.....	<u>6</u>
Yarde Metals 1713 .....	Alum & Steel .....	Moog.....	<u>6</u>
GE-Yakima 1076 .....	Off-load only.....	GE.....	<u>5</u>
Corrosion Materials 0288 .....	Hastelloy .....	Melkes.....	<u>5</u>

4.16b Non-Metallic Raw Materials

W.S. Wilson Corp. 1535 .....	Bearings .....	Melkes.....	<u>8</u>
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4.17 Saw

Metal Cutting Service 0022 ...	Sawing.....	Melkes.....	<u>9</u>
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4.18 Shot Peen/Blast

Metal Improvement 1582.....	Shot Peen and Blast ...	Eaton GF, Eaton Steerer .....	<u>9</u>
		GE-Yak, Parker A&F, Parker HSD, Moog	

4.19 Weld

<i>Interface Weld 1717.....</i>	<i>Inertia Weld .....</i>	<i>Parker HSD.....</i>	<i>N</i>
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