

**ATTACHMENT "E"**

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**Supplement to DAS 51 (DAS 35)**

**TRAINING SCHEDULE AND WORKING CONDITIONS  
Of the  
California Tooling & Machining Apprenticeship Association**

**OCCUPATION: Tool & Die Maker O\*NET: 51-4111.00**

**ARTICLE XIV Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be 8000 hours of OJT and 576 hours of RSI, and shall be completed within 4 years; the first 1000 hours of on-the-job training and 72 hours of related instruction shall be a probationary period.

**ARTICLE XVI Wage Schedule**

Journeyman Wage: **\$28.38** effective: 4-1-2017

Apprentices shall be paid not less than the following:

<b>1<sup>st</sup> period</b>	50%	6 months	1000 hours	<b>\$14.19</b> per hour
<b>2<sup>nd</sup> period</b>	53%	6 months	1000 hours	<b>\$15.61</b> per hour
<b>3<sup>rd</sup> period</b>	55%	6 months	1000 hours	<b>\$17.03</b> per hour
<b>4<sup>th</sup> period</b>	58%	6 months	1000 hours	<b>\$18.45</b> per hour
<b>5<sup>th</sup> period</b>	60%	6 months	1000 hours	<b>\$19.87</b> per hour
<b>6<sup>th</sup> period</b>	70%	6 months	1000 hours	<b>\$21.29</b> per hour
<b>7<sup>th</sup> period</b>	80%	6 months	1000 hours	<b>\$22.70</b> per hour
<b>8<sup>th</sup> period</b>	90%	6 months	1000 hours	<b>\$25.54</b> per hour

Other Compensation: None

### **Advancement Schedule:**

To advance from one period to the next the apprentice shall have met the following requirements:

- A. shall have satisfactorily completed the indicated on-the-job work hours; and
- B. shall have satisfactorily completed the indicated months in the program;
- C. shall have satisfactorily completed the indicated related and supplemental instruction school hours;

**Overtime Provision:** All overtime shall be paid at the rate of one and one-half times the wage rate for hours worked over 8 hours per day or 40 hours per week. Likewise, overtime must be paid for hours in excess of forty (40) in any one work week.

Time spent in class of Related Instruction shall not be compensated.

Not to interfere with schooling, overtime shall not be permitted when related instruction classes are scheduled.

### **Hours of Work and Working Conditions**

Straight time hours per day: 8 hours; 40 hours per week.

The work day and work week and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of journeymen.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

### **ARTICLE XVII     Work Training**

1. The employer shall see that all apprentices are under the supervision of a qualified journeyman or instructor and shall provide the necessary diversified experience and training in order to train and develop the apprentice into a skilled worker, proficient in all the work processes of the trade as outlined herein.
2. Each apprentice shall be trained in the use of new equipment, materials and process as they come into use in the occupation.
3. Each apprentice shall receive training and education in first aid, safe working practices and in the recognition of occupational health and safety hazards.
4. Each apprentice shall receive training in the recognition of illegal discrimination and sexual harassment.
5. The major work process in which apprentices will be trained as a (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

## WORK PROCESSES

### Tool & Die Maker

Processes		Minimum hours	Recommended hours *
A	Job planning & preparation: layout, tool control/ selection/ coolant change/ application, sketching, safety training, estimating.	200	300
B	Process control, documentation/quality: material identification, in-process inspection. GD&T interpretation & application/final inspection	100	200
C	Shop Maintenance: preventative maintenance, lubrication, coolant changes, calibration, cleaning of machines	100	200
D	Drilling: Drilling, tapping, reaming on a CNC or manual drill press.	200	500
E	Turning (manual) : set up & operation	400	500
F	Turning (CNC) : set up & operation	100	400
G	Milling (manual) : set up & operation	400	500
H	Milling (CNC) : set up & operation	100	1200
I	Grinding: manual or CNC setup and operation.(surface, cylindrical)	300	400
J	Secondary operations & metallurgy: heat testing, finishing, coating, surface treatment, material testing.(optional - working with composites)	100	200
K	Bench Work: deburring, fit-up, repair, assembly, fabrication, use of power and hand tools.	400	500
L	CAD / CAM - drawing import model(s), G&M code familiarity, post process & validation.	60	500
M	Electrical Discharge Machining: operates wire and/or Plunge type EDM.	100	300
N	Precision inspection: operates CMM, vision precision metrology instrumentation, writes reports	100	200
O	Tool Control: works in tool room - learn types, proper application and tool life/control	100	240
P	Planning, maintenance, tool, fixture & die design	200	260
Q	Jig Borer: precision hole & pattern location on: manual/CNC/grinder	100	400
R	Construction, assembly test & adjustment of tool die, production fixtures	1000	1200
		<b>Total *</b>	<b>8000</b>
<p>* 8000 hours of On-the-Job Training (OJT) are required to complete the apprenticeship. Any hours falling short of "recommended" in one category must be made up in other categories. If you cannot meet the "minimum" hours in one category, then we will ask the apprentice to fulfill those knowledge requirements through community college classes or other activities.</p>			

**ARTICLE XI      Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction which will not be less than 144 hours per year.

<b>Tool and Die Maker ONET 51-4111.00 Related &amp; Supplemental Instruction</b>	<b>Note: Class Title &amp; Hours may vary between school locations.</b>
<b>Class Title</b>	<b>Approx. No. Class Hours</b>
Machine Tool Technology 1	80
Blue Print Reading	60
Measurements and Calculations	72
Special Projects / NIMS	104
Machine Tool Technology 2	160
Manufacturing Materials and Processes	60
Shop Safety	10
Hand Tools/ Layout	30
<b>Min Hours = 576 over 8000 hours of OJT</b>	

**ARTICLE XV      Ratio**

A qualified employer may employ three (3) apprentices when at least one (1) journeymen are regularly employed, and three (3) additional apprentices for each one (1) journeymen employed.