

THREADING GEAR SETS AND FEED RATES FOR SHOPTASK/SHOPMASTER MACHINES 1991-2008

THREADS PER INCH

SELECTOR

POS'N 1	POS'N2				
TPI	TPI	GEAR A	GEAR B	GEAR C	GEAR D
20	10	60	30	50	27
22	11	60	33	50	27
24	12	60	36	50	27
26	13	60	39	50	27
28	14	60	42	50	27
30	15	56	42	50	27
32	16	60	48	50	27
34	17	60	51	50	27
36	18	50	54	60	27
38	19	50	57	60	27
40	20	40	48	60	27
42	21	50	63	60	27
44	22	60	33	50	54
46	23				
48	24	60	36	50	54
50	25	56	42	60	54
52	26	60	39	50	54
54	27	40	27	50	54
56	28	60	42	50	54
58	29				
60	30	56	42	50	54
62	31	40	31	50	54
64	32	60	48	50	54
66	33	40	33	50	54
68	34	60	51	50	54
70	35	40	42	60	54
72	36	50	54	40	36
74	37				
76	38	50	57	60	54
78	39	40	39	50	54
80	40	40	48	60	54
82	41				
84	42	50	63	60	54
86	43				

POS'N 1	POS'N2	GEAR A	GEAR B	GEAR C	GEAR D
88	44	50	33	30	54
90	45	40	27	30	54
92	46				
94	47				
96	48	50	36	30	54
98	49	40	49	50	54
100	50	56	42	30	54
102	51	40	51	50	54
104	52	50	39	30	54
106	53				
108	54				
110	55	40	33	30	54
112	56	50	42	30	54

METRIC

SELECTOR

POS'N 1	POS'N2				
MM	MM	GEAR A	GEAR B	GEAR C	GEAR D
0.1	0.2				
0.125	0.25				
0.15	0.3				
0.175	0.35	49	48	30	60
0.2	0.4	42	36	30	60
0.225	0.45	42	32	30	60
0.25	0.5	30	54	63	48
0.3	0.6	50	40	42	60
0.35	0.7	50	40	49	60
0.4	0.8	50	40	56	60
0.45	0.9	50	40	63	60
0.5	1	50	40	49	42
0.6	1.2	60	40	42	36
0.7	1.4	56	42	49	32
0.75	1.5	60	36	42	32
0.8	1.6	56	32	48	36
0.9	1.8	63	32	36	27
1	2	60	36	56	32
1.25	2.5	63	32	50	27
1.5	3	63	32	60	27
1.75	3.5				
2	4				
2.5	5				
3	6				

NOTE!!

WITH THE USE OF OUR COARSE THREAD KIT, THREADS AS COARSE AS 4 TPI CAN BE CUT. WITH THIS KIT, YOU MAY FIND MANY SIZES AVAILABLE BY SIMPLY DIVIDING THE ABOVE NUMBERS BY 3.

EX: 24 TPI / 3 = 8 TPI USING THE SAME GEAR SET.

BLANK AREAS INDICATE THREAD STYLES NOT POSSIBLE.

If your machine is equipped with ball screws, then all the threads will be coarser-

EX- The gear set for 24 TPI will cut 12 TPI with ballscrews as shown below

THREADS PER INCH (ENGLISH / SAE)					
Control Lever		Gear Positions			
Position I	Position II	A	B	C	D
10	5	60	30	50	27
12	6	60	36	50	27
14	7	60	42	50	27
16	8	60	48	50	27
18	9	50	54	60	27
20	10	50	36	56	42
22	11	60	33	50	54
24	12	60	36	50	54
26	13	60	39	50	54
28	14	60	42	50	54
30	15	56	42	50	54
32	16	60	48	50	54
34	17	60	51	50	54
36	18	63	40	32	49
38	19	50	57	60	54
40	20	50	36	42	63

MILLIMETERS PER THREAD (METRIC)					
Control Lever		Gear Positions			
Position I	Position II	A	B	C	D
0.15	0.30	30	60	27	63
0.50	1.00	50	60	42	48
0.60	1.20	42	56	63	54
0.70	1.40	42	63	49	32

0.75	1.50	50	60	42	32
0.80	1.60	49	56	48	36
1.00	2.00	50	40	49	42
1.25	2.50	63	32	50	54
1.50	3.00	60	36	42	32
1.75	3.50	60	36	49	32
2.00	4.00	60	36	56	32
2.50	5.00	63	32	50	27
3.00	6.00	63	32	60	27

FEED RATES PER REVOLUTION

GEARS

LOWSPEED

HIGH SPEED

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>FEED IN</u>	<u>FEED MM</u>	<u>FEED IN</u>	<u>FEED MM</u>
30	60	27	63	.0029	.073	.0058	.147
30	57	27	63	.0030	.077	.0061	.155
33	60	27	63	.0032	.081	.0064	.162
33	57	27	63	.0033	.085	.0067	.170
36	60	27	63	.0035	.088	.0069	.176
36	57	27	63	.0037	.093	.0073	.186
39	60	27	63	.0038	.096	.0075	.191
36	56	27	60	.0039	.099	.0078	.198
42	60	27	63	.0041	.103	.0081	.206
39	60	30	63	.0042	.106	.0084	.212
42	56	27	63	.0043	.110	.0087	.220
42	60	30	63	.0045	.114	.0090	.229
39	57	30	60	.0046	.117	.0092	.235
49	60	27	63	.0047	.120	.0095	.240
51	60	27	63	.0049	.125	.0098	.250
49	56	27	63	.0051	.129	.0101	.257
54	60	27	63	.0052	.132	.0104	.265

49	56	27	60	.0053	.135	.0106	.270
57	60	27	63	.0055	.140	.0110	.279
56	57	27	63	.0057	.144	.0114	.289
54	60	30	63	.0058	.147	.0116	.294
57	56	27	63	.0059	.150	.0118	.299
60	57	27	63	.0061	.155	.0122	.309
60	56	27	63	.0062	.157	.0124	.315
56	57	30	63	.0063	.160	.0126	.321
60	54	27	63	.0064	.163	.0129	.327
57	56	30	63	.0065	.166	.0131	.332
63	57	27	60	.0067	.171	.0134	.341
63	56	27	60	.0068	.174	.0137	.347
57	56	32	63	.0070	.177	.0140	.355
63	54	27	60	.0071	.180	.0142	.360
63	56	27	57	.0072	.183	.0144	.365
60	56	32	63	.0073	.187	.0147	.373
63	57	30	60	.0075	.189	.0149	.379
63	56	30	60	.0076	.193	.0152	.386
56	54	33	60	.0077	.196	.0154	.391
63	49	27	60	.0078	.198	.0156	.397
63	57	32	60	.0080	.202	.0159	.404
63	56	32	60	.0081	.206	.0162	.411
63	57	33	60	.0082	.208	.0164	.417
63	56	33	60	.0084	.212	.0167	.424
63	56	32	57	.0085	.217	.0171	.433
63	54	33	60	.0087	.220	.0173	.440
63	56	33	57	.0088	.223	.0176	.447
63	57	36	60	.0090	.227	.0179	.455
63	56	36	60	.0091	.231	.0182	.463
63	54	33	56	.0093	.236	.0186	.471
63	54	36	60	.0095	.240	.0189	.480
63	56	36	57	.0096	.244	.0192	.487
63	57	39	60	.0097	.246	.0194	.493

63	56	39	60	.0099	.251	.0197	.501
63	51	36	60	.0100	.254	.0200	.508
63	54	36	56	.0101	.257	.0203	.514
63	54	39	60	.0102	.260	.0205	.520
56	39	32	60	.0103	.263	.0207	.525
63	57	42	60	.0104	.265	.0209	.531
63	56	42	60	.0106	.270	.0213	.540
56	57	51	63	.0107	.273	.0215	.545
63	51	39	60	.0108	.275	.0217	.551
63	54	42	60	.0110	.280	.0221	.560
63	56	42	57	.0112	.284	.0224	.568
56	51	48	63	.0113	.287	.0226	.574
63	51	39	57	.0114	.290	.0228	.580
63	48	39	60	.0115	.293	.0230	.585
63	51	42	60	.0117	.297	.0233	.593
63	54	42	56	.0118	.300	.0236	.600
63	57	48	60	.0119	.303	.0239	.606
63	51	39	54	.0120	.306	.0241	.612
63	57	49	60	.0122	.310	.0244	.619
63	51	42	57	.0123	.312	.0246	.624
63	56	49	60	.0124	.315	.0248	.630
63	51	42	56	.0125	.318	.0250	.635
63	57	51	60	.0127	.322	.0254	.644
63	56	48	57	.0128	.325	.0256	.650
63	56	51	60	.0129	.328	.0258	.656
63	56	49	57	.0131	.332	.0261	.663
63	42	39	60	.0132	.334	.0263	.669
63	54	48	57	.0133	.337	.0265	.674
63	57	54	60	.0134	.341	.0269	.682
63	54	49	57	.0135	.344	.0271	.688
63	56	54	60	.0137	.347	.0273	.694
63	54	49	56	.0138	.350	.0276	.700
63	57	56	60	.0139	.354	.0279	.707
63	54	51	57	.0141	.358	.0282	.716

63	51	48	56	.0143	.363	.0286	.726
63	56	57	60	.0144	.366	.0289	.733
63	51	49	56	.0146	.371	.0292	.741
63	54	56	60	.0147	.373	.0294	.747
63	51	48	54	.0148	.377	.0296	.753
63	54	57	60	.0150	.380	.0299	.760
63	30	32	60	.0151	.384	.0302	.768
63	48	49	57	.0152	.387	.0305	.774
63	49	48	54	.0154	.392	.0309	.784
63	51	56	60	.0156	.395	.0311	.791
60	32	39	63	.0157	.398	.0313	.796
63	51	57	60	.0158	.402	.0317	.805
63	56	60	57	.0160	.406	.0320	.812
57	30	32	51	.0161	.409	.0322	.818
63	49	56	60	.0162	.411	.0324	.823
63	51	56	57	.0164	.416	.0328	.832
63	54	60	57	.0166	.421	.0332	.842
63	49	54	56	.0167	.425	.0335	.850
63	54	60	56	.0169	.429	.0338	.857
63	49	56	57	.0171	.433	.0341	.866
63	33	36	54	.0172	.436	.0344	.873
63	51	56	54	.0173	.439	.0346	.879
63	48	56	57	.0174	.442	.0348	.884
63	51	60	57	.0176	.446	.0351	.892
63	49	57	56	.0177	.449	.0353	.897
63	51	60	56	.0179	.454	.0357	.908
63	48	57	56	.0180	.458	.0361	.916
60	49	56	51	.0182	.461	.0363	.922
63	49	60	57	.0183	.464	.0365	.928
63	48	56	54	.0184	.467	.0368	.933
63	51	60	54	.0185	.471	.0371	.941
63	48	60	57	.0187	.474	.0373	.947
63	48	60	57	.0188	.477	.0375	.953
60	33	30	39	.0189	.480	.0378	.959

63	48	60	56	.0190	.482	.0380	.964
63	42	54	57	.0192	.487	.0384	.975
63	49	60	54	.0193	.490	.0386	.980
63	49	57	51	.0194	.493	.0388	.985
63	42	54	56	.0195	.496	.0391	.992
63	48	60	54	.0197	.500	.0394	1.000
63	48	57	51	.0198	.503	.0396	1.006
63	32	42	56	.0199	.506	.0399	1.013
63	36	51	60	.0201	.510	.0402	1.020
63	48	56	49	.0203	.514	.0405	1.029
63	49	60	51	.0204	.519	.0408	1.037
63	42	57	56	.0206	.524	.0412	1.047
63	39	57	60	.0207	.526	.0414	1.052
63	48	60	51	.0208	.529	.0417	1.059
63	42	56	54	.0210	.533	.0420	1.067
63	36	51	57	.0211	.537	.0423	1.074
63	42	60	57	.0213	.541	.0426	1.083
63	39	56	57	.0214	.544	.0429	1.088
63	27	39	57	.0216	.547	.0431	1.095
63	42	60	56	.0217	.551	.0434	1.102
57	30	51	60	.0218	.554	.0436	1.108
63	33	51	60	.0219	.556	.0438	1.113
63	36	56	60	.0221	.560	.0441	1.120
63	39	57	56	.0222	.564	.0444	1.128
63	36	54	57	.0224	.568	.0448	1.137
63	42	60	54	.0225	.572	.0450	1.143
63	42	57	51	.0226	.575	.0453	1.150
63	36	54	56	.0228	.579	.0456	1.157
63	39	60	57	.0230	.583	.0459	1.166
63	39	54	51	.0231	.586	.0462	1.173
63	36	56	57	.0232	.590	.0464	1.179
63	39	60	56	.0234	.593	.0467	1.187
63	42	57	49	.0236	.598	.0471	1.197
60	33	54	56	.0237	.601	.0473	1.202

63	42	60	51	.0238	.605	.0476	1.210
63	39	56	51	.0239	.608	.0479	1.216
63	36	57	56	.0240	.611	.0481	1.222
63	39	60	54	.0242	.615	.0485	1.231
63	39	57	51	.0244	.619	.0487	1.238
63	33	57	60	.0245	.622	.0490	1.244
63	36	51	49	.0246	.625	.0492	1.249
63	33	49	51	.0248	.629	.0495	1.258
63	36	60	57	.0249	.632	.0497	1.263
63	36	54	51	.0250	.635	.0500	1.271
63	32	54	57	.0252	.640	.0504	1.279
63	36	60	56	.0253	.643	.0506	1.286
63	39	56	48	.0254	.646	.0509	1.292
60	33	51	49	.0255	.649	.0511	1.298
63	39	60	51	.0257	.652	.0513	1.303
60	32	57	56	.0258	.654	.0515	1.309
63	39	57	48	.0259	.658	.0518	1.316
56	27	39	42	.0260	.660	.0520	1.321
63	32	56	57	.0261	.663	.0522	1.326
63	36	60	54	.0263	.667	.0525	1.333
63	36	57	51	.0264	.671	.0528	1.341
63	36	54	48	.0266	.675	.0532	1.350
63	39	60	49	.0267	.678	.0534	1.357
63	33	51	49	.0268	.681	.0536	1.363
63	30	57	60	.0269	.684	.0539	1.368
63	33	60	57	.0271	.689	.0543	1.378
63	39	60	48	.0273	.692	.0545	1.385
63	36	57	49	.0275	.698	.0550	1.396
63	33	60	56	.0276	.701	.0552	1.403
63	36	60	51	.0278	.706	.0556	1.412
63	32	60	57	.0280	.711	.0560	1.421
63	32	54	51	.0281	.715	.0563	1.430
63	33	56	51	.0283	.719	.0566	1.438
63	32	60	56	.0285	.723	.0570	1.447

63	33	60	54	.0286	.727	.0573	1.455
63	33	57	51	.0288	.732	.0576	1.463
63	36	60	49	.0289	.735	.0579	1.470
63	39	56	42	.0291	.739	.0582	1.477
63	32	56	51	.0292	.741	.0584	1.483
63	32	54	49	.0293	.744	.0586	1.488
63	27	56	60	.0294	.747	.0588	1.494
63	32	60	54	.0295	.750	.0591	1.500
63	32	57	51	.0297	.755	.0594	1.509
63	30	60	57	.0298	.758	.0597	1.516
63	33	57	49	.0300	.762	.0600	1.523
63	30	51	48	.0301	.765	.0602	1.530
63	27	49	51	.0303	.769	.0605	1.537
63	30	60	56	.0304	.772	.0607	1.543
57	33	51	39	.0305	.775	.0610	1.549
63	33	57	48	.0306	.777	.0612	1.555
63	30	39	36	.0307	.780	.0614	1.560
63	32	57	49	.0309	.785	.0618	1.571
63	39	60	42	.0312	.791	.0623	1.583
63	32	60	51	.0313	.794	.0625	1.588
51	27	48	39	.0314	.797	.0628	1.594
63	30	60	54	.0315	.800	.0630	1.600
63	30	57	51	.0317	.805	.0634	1.610
63	30	54	48	.0319	.810	.0638	1.620
63	27	57	56	.0321	.814	.0641	1.629
63	33	60	48	.0322	.818	.0644	1.637
63	30	56	49	.0324	.823	.0648	1.646
63	32	60	49	.0325	.827	.0651	1.653
63	27	56	54	.0327	.830	.0653	1.659
63	27	51	49	.0328	.833	.0656	1.666
63	30	57	49	.0330	.838	.0660	1.675
63	27	60	57	.0332	.842	.0663	1.684
63	30	60	51	.0334	.847	.0667	1.694
63	27	51	48	.0335	.850	.0669	1.700

63	27	32	30	.0336	.853	.0672	1.707
63	27	60	56	.0338	.857	.0675	1.715
63	36	56	39	.0339	.862	.0678	1.723
57	32	51	36	.0341	.865	.0681	1.731
63	32	54	42	.0342	.868	.0683	1.736
63	33	56	42	.0344	.873	.0687	1.746
63	36	57	39	.0345	.877	.0691	1.754
63	30	60	49	.0347	.882	.0694	1.763
63	30	48	39	.0349	.886	.0698	1.773
63	27	50	54	.0350	.889	.0700	1.778
54	27	39	30	.0351	.892	.0702	1.783
63	27	57	51	.0352	.894	.0704	1.788
60	30	51	39	.0353	.897	.0706	1.794
63	30	60	48	.0354	.900	.0709	1.800
63	33	54	39	.0357	.906	.0714	1.813
60	33	57	39	.0359	.911	.0717	1.822
63	32	57	42	.0361	.916	.0721	1.832
63	32	49	36	.0362	.919	.0724	1.838
63	36	60	39	.0363	.923	.0727	1.846
63	30	54	42	.0365	.926	.0729	1.852
63	27	57	49	.0366	.931	.0733	1.861
63	33	60	42	.0368	.935	.0736	1.870
60	27	48	39	.0369	.938	.0738	1.876
63	27	60	51	.0371	.941	.0741	1.883
63	30	42	32	.0372	.945	.0744	1.890
63	27	57	48	.0374	.950	.0748	1.900
54	30	51	33	.0376	.954	.0751	1.908
63	33	57	39	.0377	.957	.0753	1.914
63	30	56	42	.0378	.960	.0756	1.920
63	32	60	42	.0380	.964	.0759	1.929
63	32	56	39	.0832	.969	.0763	1.939
63	27	39	32	.0384	.975	.0768	1.950
63	27	60	49	.0386	.980	.0771	1.959
54	30	51	32	.0387	.984	.0775	1.967

63	32	57	39	.0388	.987	.0777	1.973
60	27	39	30	.0390	.991	.0780	1.981
60	32	51	33	.0391	.994	.0782	1.987
63	30	54	39	.0393	.997	.0785	1.994
63	27	60	48	.0394	1.000	.0788	2.000
63	33	60	39	.0397	1.007	.0793	2.014
63	32	54	36	.0399	1.013	.0797	2.025
63	33	56	36	.0401	1.018	.0802	2.037
57	27	51	36	.0404	1.026	.0808	2.051
63	30	60	42	.0405	1.029	.0810	2.057
63	30	56	39	.0407	1.034	.0814	2.068
63	32	60	39	.0409	1.039	.0818	2.077
63	32	51	33	.0411	1.043	.0822	2.087
63	27	51	39	.0412	1.046	.0824	2.093
63	30	57	39	.0414	1.052	.0829	2.105
60	27	54	39	.0415	1.055	.0831	2.110
60	30	51	33	.0417	1.060	.0835	2.120
57	30	54	33	.0420	1.066	.0839	2.132
63	32	57	36	.0421	1.069	.0842	2.138
57	27	49	33	.0423	1.075	.0846	2.150
63	30	54	36	.0425	1.080	.0851	2.160
63	27	57	42	.0428	1.086	.0855	2.172
63	33	60	36	.0430	1.091	.0859	2.182
60	27	56	39	.0431	1.094	.0862	2.188
57	30	54	32	.0433	1.099	.0866	2.199
63	32	54	33	.0435	1.105	.0870	2.209
63	30	60	39	.0436	1.108	.0872	2.216
63	30	51	33	.0438	1.113	.0876	2.226
63	30	56	36	.0441	1.120	.0882	2.240
63	32	60	36	.0443	1.125	.0886	2.250
63	27	51	36	.0446	1.133	.0893	2.267
63	30	57	36	.0449	1.140	.0898	2.280
63	27	60	42	.0450	1.143	.0900	2.286
63	32	56	33	.0451	1.146	.0902	2.291

63	27	56	39	.0452	1.149	.0905	2.298
57	27	51	32	.0454	1.154	.0908	2.307
60	30	54	32	.0456	1.157	.0911	2.315
56	27	49	30	.0457	1.162	.0915	2.323
63	32	57	33	.0459	1.166	.0918	2.332
63	27	57	39	.0460	1.169	.0921	2.339
63	30	54	33	.0464	1.178	.0928	2.357
60	30	57	33	.0466	1.185	.0933	2.369
63	27	49	33	.0468	1.188	.0935	2.376
63	30	60	36	.0473	1.200	.0945	2.400
60	27	57	36	.0475	1.206	.0950	2.413
56	27	51	30	.0476	1.209	.0952	2.418
63	30	54	32	.0478	1.215	.0957	2.430
60	27	48	30	.0480	1.219	.0960	2.438
63	30	56	33	.0481	1.222	.0962	2.444
63	32	60	33	.0483	1.227	.0966	2.455
63	27	60	39	.0485	1.231	.0969	2.462
63	27	51	33	.0487	1.237	.0974	2.473
63	30	57	33	.0490	1.244	.0979	2.488
60	27	54	33	.0491	1.247	.0982	2.494
63	30	56	32	.0496	1.260	.0992	2.520
63	27	57	36	.0499	1.267	.0998	2.534
63	27	51	32	.0502	1.275	.1004	2.550
63	30	57	32	.0505	1.283	.1010	2.565
60	27	54	32	.0506	1.286	.1013	2.572
60	27	56	33	.0509	1.293	.1018	2.586
57	27	54	30	.0513	1.303	.1026	2.606
63	30	60	33	.0515	1.309	.1031	2.619
60	27	57	33	.0518	1.316	.1036	2.632
63	27	60	36	.0525	1.333	.1050	2.667
63	30	60	32	.0532	1.350	.1063	2.700
63	27	56	33	.0535	1.358	.1069	2.715
60	27	54	30	.0540	1.372	.1080	2.743
63	27	57	33	.0544	1.382	.1088	2.764

63	27	56	32	.0551	1.400	.1103	2.800
60	27	56	30	.0560	1.422	.1120	2.845
63	27	57	32	.0561	1.425	.1122	2.850
63	27	54	30	.0567	1.440	.1134	2.880
60	27	57	30	.0570	1.448	.1140	2.896
63	27	60	33	.0573	1.455	.1145	2.909
63	27	56	30	.0588	1.494	.1176	2.987
63	27	60	32	.0591	1.500	.1181	3.000
63	27	57	30	.9599	1.520	.1197	3.040
63	27	60	30	.0630	1.600	.1260	3.200

THREADING INSTRUCTIONS 1991-2008

Early Shoptask/Shopmaster machines use a different style of threading system than most conventional lathes. This is due in part to the CNC drives being built into the machine. If you follow the instructions and experiment on some scrap stock, you will find that it is just as easy as the thread dial type machines. For you experienced machinists, however, you may have to make a mental note to “forget” the system you are used to before learning this one.

The principle of multiple pass threading consists of 2 important features;

- 1. You must always start and stop your carriage at the same point along the X axis of the machine and,**
- 2. You must always start each threading pass in the same position of the chuck rotation.**

If you miss either of these rules, you will not follow in the same path each time and end up “wiping” away your previous cuts.

In order to maintain your position along your carriage travel, you select your starting and stopping points and can simply set your X axis dial to 0 and count the turns, or if you have a Digital Readout system, set the 0 point and the stopping point.

Setting the rotational position of the chuck is as simple as making a reference mark on the chuck with felt pin or any device you prefer, and then making a corresponding mark somewhere on the machine body so that you can always

bring the chuck mark around to meet the mark on the machine. You can even make a permanent pointer if you like.

Once the 2 main features are established, and assuming you have the proper threading tool and your center height is set etc., you are ready to make some test cuts.

CUTTING THE THREADS

- 1. Back your carriage up a few turns past the start point, then come forward to the start point to remove any inherent lash in the lead screw.**
- 2. Bring the chuck around until your reference points are lined up.**
- 3. Engage your lead screw shifter into the forward travel position .**
- 4. Set the depth of your first cut on the Y axis table. (Have your dial locked to 0 so that you can easily read the depth and always return to 0. If you have a Digital Readout system, 0 your display and read your depths from the display screen.**
- 5. Now you are ready for your first pass, you will note that you are starting at the reference mark on your chuck and the 0 point on your X axis carriage.**
- 6. Turn on the motor and run the first pass and then move your shifter into neutral at the end of the pass.**
- 7. Now back your Y axis away from the part beyond your 0 point.**
- 8. Return the carriage to the starting point, backing the handle up and returning to 0 as explained before.**
- 9. Set the Y axis to the depth of your second cut.**
- 10. Bring your chuck around to align with your marker.**
- 11. Put your lead screw shifter into the forward travel position again. You will now see that you are ready to start your second pass at the same point of the x axis carriage and rotation of the chuck. This insures that you will be cutting in the same "groove" as your first pass.**
- 12. Start your motor and allow the carriage to make the second pass.**
- 13. Continue repeating this routine until you have achieved the proper thread depth.**

HELPFUL HINTS

Threading is a skill that must be learned and practiced, so do not be discouraged if you make some errors early on. It is important to have your tool at the proper height, and for smaller diameter parts use your tailstock

with center or the follow rest to prevent deflection of the part. Always set your spindle to the lowest speed for threading. The “by the book” method is to set your tool at 29.5 degrees to the part, but for most everyday jobs this is not necessary.