

TROUBLE-SHOOTING IN PRECISION GRINDING

Problem	Cylindrical & Internal Grinding	Surface Grinding	Centreless Grinding
Wheel is hard and glazing	<ol style="list-style-type: none"> 1) Increase the infeed 2) Increase the job speed 3) Increase the traverse speed 4) Increase the diamond traverse rate 5) Change to a softer wheel 	<ol style="list-style-type: none"> 1) Increase the infeed 2) Increase the table speed 3) Increase the cross-feed 4) Increase the diamond traverse rate 5) Change to a softer wheel 	<ol style="list-style-type: none"> 1) Increase the depth-of-cut 2) Increase the speed of the control wheel 3) Increase the diamond traverse rate 4) Change to a softer wheel
Wheel wears out fast	<ol style="list-style-type: none"> 1) Reduce the infeed 2) Reduce the job speed 3) Reduce the traverse speed 4) Change to a harder wheel 	<ol style="list-style-type: none"> 1) Reduce the infeed 2) Reduce the table speed 3) Reduce the cross-feed 4) Change to a harder wheel 	<ol style="list-style-type: none"> 1) Reduce the depth-of-cut 2) Reduce the speed of the control wheel 3) Change to a harder wheel
Wheel loses form quickly	<ol style="list-style-type: none"> 1) Reduce the infeed 2) Use a finer and harder wheel 	<ol style="list-style-type: none"> 1) Reduce the infeed 2) Use a finer and harder wheel 	<ol style="list-style-type: none"> 1) Reduce the infeed 2) Use a finer and harder wheel
Job is not round (oval, lobed, etc.)	<ol style="list-style-type: none"> 1) Re-grind the centres and centre holes 2) Check the internal grinding fixture for run-out and reduce clamping pressure 	—	<ol style="list-style-type: none"> 1) Increase the height of job above centres 2) Increase the speed of the control wheel
Chatter marks after dressing	<ol style="list-style-type: none"> 1) Balance the wheel 2) Check belts and spindle bearings 	<ol style="list-style-type: none"> 1) Balance the wheel 2) Check belts and spindle bearings 	<ol style="list-style-type: none"> 1) Balance the wheel 2) Check belts and spindle bearings 3) Reduce height of job above centres

Problem	Cylindrical & Internal Grinding	Surface Grinding	Centreless Grinding
Finish is poor	<ol style="list-style-type: none"> 1) Use spark-out 2) Reduce job speed 3) Reduce traverse speed 4) Reduce diamond traverse rate 5) Use a finer wheel 	<ol style="list-style-type: none"> 1) Use spark-out 2) Reduce table speed 3) Reduce cross-feed 4) Reduce diamond traverse rate 5) Use a finer wheel 	<ol style="list-style-type: none"> 1) Reduce depth-of-cut 2) Reduce the speed of the control wheel 3) Reduce diamonds traverse rate 4) Use a finer wheel
Geometrical inaccuracy (taper, barrel shape, bell mouth etc.)	<ol style="list-style-type: none"> 1) Check table and centre alignment 2) Reduce over-run at ends of stroke to one-third of the wheel width 3) Use steady rests for long jobs 	<ol style="list-style-type: none"> 1) Take a light finishing cut with reduced table traverse and cross-feed 2) Use a harder wheel 	<ol style="list-style-type: none"> 1) Check alignment of dressing fixtures 2) Check alignment of work guides
Diamond marks	<ol style="list-style-type: none"> 1) Reduce depth-of-cut and traverse rate in dressing 	<ol style="list-style-type: none"> 1) Reduce depth-of-cut and traverse rate in dressing 	<ol style="list-style-type: none"> 1) Reduce depth-of-cut and traverse rate in dressing
Burn marks	<ol style="list-style-type: none"> 1) Reduce the infeed 2) Increase the job speed 3) Increase the coolant flow 4) Use a softer wheel 	<ol style="list-style-type: none"> 1) Reduce the infeed 2) Increase the table speed 3) Increase the coolant flow 4) Use a softer wheel 	<ol style="list-style-type: none"> 1) Reduce the depth-of-cut 2) Increase the speed of the control wheel 3) Increase the coolant flow 4) Use a softer wheel
Scratches	<ol style="list-style-type: none"> 1) Check filtration of the coolant 	<ol style="list-style-type: none"> 1) Check filtration of the coolant 	<ol style="list-style-type: none"> 1) Check filtration of the coolant 2) Re-grind work blade