

Fault finding

Symptom	Cause	Action
Probe fails to power up (no LEDs illuminated or fails to indicate current probe settings).	Exhausted batteries.	Change batteries.
	Unsuitable batteries.	Change batteries.
	Batteries inserted incorrectly.	Check battery insertion.
	Batteries removed for too short a time and probe has not reset.	Remove batteries for a minimum of 5 seconds.
Probe fails to switch on.	Exhausted batteries.	Change batteries.
	Batteries inserted incorrectly.	Check battery insertion.
	Probe out of range.	Check position of RMI or RMI-Q, see operating envelope.
	No RMI or RMI-Q 'start/stop' signal (radio on mode only).	Check RMI or RMI-Q for green start LED.
	Incorrect spin speed (spin switch on only).	Check spin speed and duration.
	Malfunctioning shank switch (shank switch mode only).	Check switch operation.
	Incorrect switch on method configured.	Check configuration and alter as required.
	Incorrect multiple probe mode setting configured.	Check configuration and alter as required.
RMP60 in hibernation mode (radio on mode only).	Ensure probe is in range and wait up to 30 seconds, then resend switch on signal. Check position of RMI or RMI-Q, see operating envelope.	

Symptom	Cause	Action
Machine stops unexpectedly during a probing cycle.	Radio link failure/RMP60 out of range.	Check interface/receiver and remove obstruction.
	RMI or RMI-Q receiver/machine fault.	Refer to receiver/machine user's guide.
	Exhausted batteries.	Change batteries.
	Probe unable to find target surface.	Check that part is correctly positioned and that stylus has not broken.
	Stylus not given sufficient time to settle from a rapid deceleration.	Add a short dwell before the probing move (length of dwell will depend on stylus length and rate of deceleration).
	False probe trigger.	Enable enhanced trigger filter.
	Selection error for RMI-Q.	Review interface error indication and correct.
Probe crashes.	Workpiece obstructing probe path.	Review probing software.
	Probe length offset missing	Review probing software.

Symptom	Cause	Action
Poor probe repeatability and/or accuracy.	Debris on part or stylus.	Clean part and stylus.
	Poor tool change repeatability.	Redatum probe after each tool change.
	Loose probe mounting on shank or loose stylus.	Check and tighten as appropriate.
	Calibration out of date and/or incorrect offsets.	Review probing software.
	Calibration and probing speeds not the same.	Review probing software.
	Calibration feature has moved.	Correct position.
	Measurement occurs as stylus leaves surface.	Review probing software.
	Measurement occurs within the machine's acceleration and deceleration zone.	Review probing software and probe filter settings.
	Probing speed too high or too slow.	Perform simple repeatability trials at various speeds.
	Temperature variation causes machine and workpiece movement.	Minimise temperature changes.
	Machine tool faulty.	Perform health checks on machine tool.
RMP60 status LEDs do not correspond to RMI or RMI-Q status LEDs.	Radio link failure – RMP60 out of RMI or RMI-Q range.	Check position of RMI or RMI-Q, see operating envelope.
	RMP60 has been enclosed/shielded by metal.	Change batteries.
	RMP60 and RMI or RMI-Q are not partnered.	Partner RMP60 and RMI or RMI-Q.

Symptom	Cause	Action
RMI or RMI-Q error LED lit during probing cycle.	Probe not switched on or probe timed out.	Change setting. Review turn off method.
	Probe out of range.	Check position of RMI or RMI-Q see operating envelope.
RMI or RMI-Q low battery LED lit.	Low batteries.	Change batteries soon.
Reduced range.	Local radio interference.	Identify and remove.
Probe fails to switch off.	Incorrect switch off method configured.	Check configuration and alter as required.
	No RMI or RMI-Q 'start/stop' signal (radio on mode only).	Check RMI or RMI-Q for green start LED.
	Probe in timeout mode and placed in tool magazine and is being triggered by movement.	Use shorter timeout setting or use different switch off mode.
	Malfunctioning shank switch (shank switch mode only).	Check switch operation.
	Incorrect spin speed (spin switch on only).	Check spin speed.
	Level start used for M code on/off when the probe is set to radio on/timeout off.	Change to a pulsed M code or change the probe to radio on/off.
Probe goes into Trigger Logic™ configuration mode and cannot be reset.	Probe was triggered when batteries were inserted.	Do not touch the stylus or stylus mounting face during battery insertion.

Parts list

Type	Part number	Description
RMP60	A-5742-0001	RMP60 probe with batteries, tool kit and quick-start guide (factory set to radio on/radio off).
RMP60M module	A-5742-1003	RMP60M module with batteries, tool kit and quick-start guide (factory set to radio on/radio off).
Battery	P-BT03-0005	AA battery – alkaline type – supplied as standard with probe (two required).
Battery	P-BT03-0008	AA battery – Lithium Thionyl Chloride (two required).
Stylus	A-5000-3709	PS3-1C ceramic stylus 50 mm long with Ø6 mm ball.
Weak link kit	A-2085-0068	Weak link (Part no. M-2085-0069 x 2) and 5 mm AF spanner.
Tool kit	A-4038-0304	Probe tool kit comprising Ø1.98 mm stylus tool, 2.0 mm AF hexagon key, 2.5 mm AF hexagon key (x 2), 4.0 mm AF hexagon key (x 2) and shank grub screw (x 2).
Battery cassette	A-4038-0300	RMP60 battery cassette assembly.
Cassette seal	A-4038-0301	Battery cassette housing seal.
Diaphragm kit	A-5312-0302	RMP60 diaphragm kit.
Bobbin kit	A-4038-0303	Bobbin for shank switch (supplied with shank).
RMI	A-4113-0050	RMI – side exit – with 15 m (49.2 ft) cable, tool kit and user's guide.
RMI-Q	A-5687-0050	RMI-Q – side exit – with 15 m (49.2 ft) cable, tool kit and user's guide.
Mounting bracket	A-2033-0830	Mounting bracket with fixing screws, washers and nuts.
Styli tool	M-5000-3707	Tool for tightening/releasing styli.
LP2	A-2063-6098	LP2 probe complete with two C spanners and TK1 tool kit.
Extension L100	A-4038-1010	RMP60M extension - 100 mm long.
Extension L150	A-4038-1027	RMP60M extension - 150 mm long.
Extension L200	A-4038-1028	RMP60M extension - 200 mm long.
RMP60/OMP60M probe module assembly	A-4038-1002	RMP60M probe module assembly.

Type	Part number	Description
RMP60M/LP2 adaptor	A-4038-0212	RMP60M LP2 adaptor assembly.
LPE1	A-2063-7001	LPE1 extension bar - 50 mm long.
LPE2	A-2063-7002	LPE1 extension bar - 100 mm long.
LPE3	A-2063-7003	LPE1 extension bar - 150 mm long.
MA4	A-2063-7600	MA4 90° adaptor assembly.
Publications. These can be downloaded from our web site at www.renishaw.com		
RMP60	A-5742-8500	Quick-start guide: for rapid set-up of the RMP60 probe, includes CD with installation guides.
Styli	H-1000-3200	Technical specification: Styli and accessories.
Software features	H-2000-2289	Data sheet: Probe software for machine tools – illustrated features.
Software list	H-2000-2298	Data sheet: Probe software for machine tools – list of programs.
Taper shanks	H-2000-2011	Data sheet: Taper shanks for machine tool probes.
RMI	A-4113-8550	Quick-start guide: RMI – radio machine interface.
RMI-Q	A-5687-8500	Quick-start guide: RMI-Q – radio machine interface.

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