

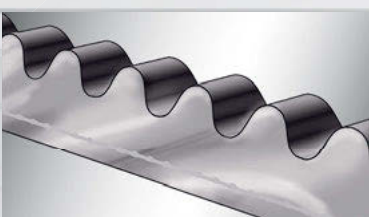
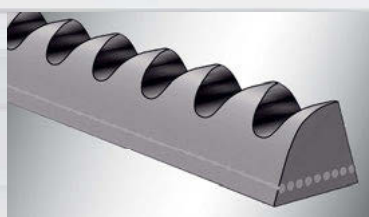

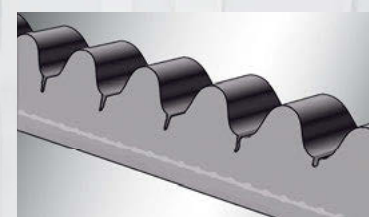
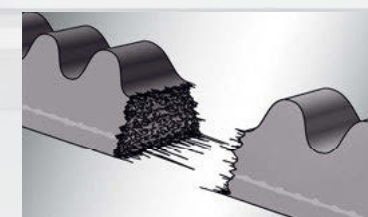
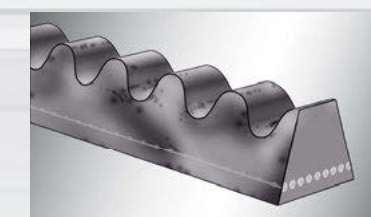
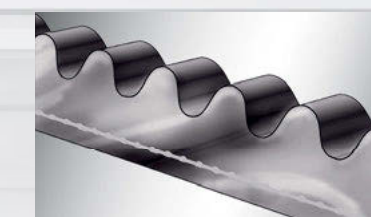
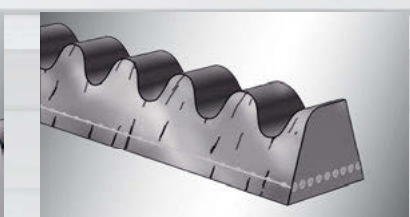


AUTOMOTIVE TECHNOLOGY

THE LITTLE “ABC” IN THE EVENT OF DAMAGE




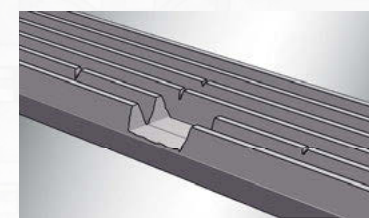
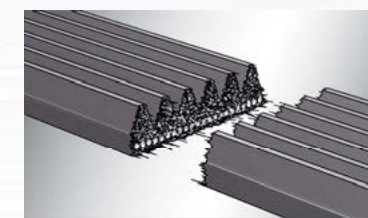

OPTIBELT V-BELTS **MARATHON 1 + 2 M=S***

*M=S “MATCHED SETS”, CAN BE USED IN SETS


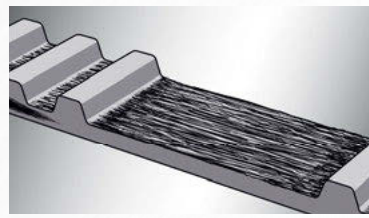

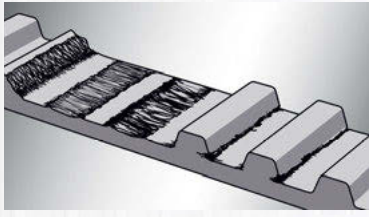
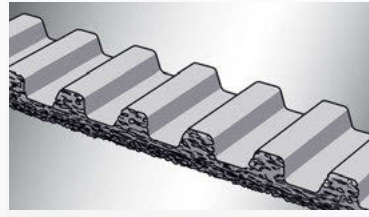
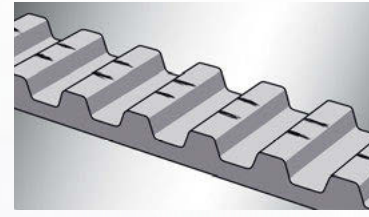
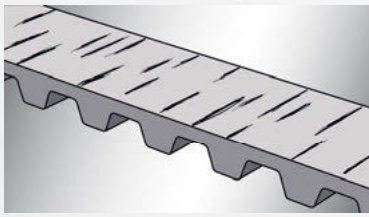
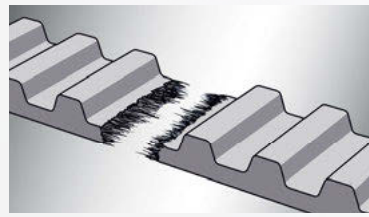
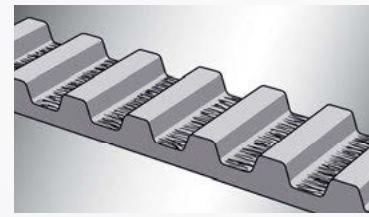
							
HARDENED, POLISHED FLANKS 1. Incorrect tensioning 2. Belt tension cord damaged by incorrect installation	UNEVEN SECTION WEAR 1. Pulleys not aligned 2. High belt vibrations	BELT RUNNING NOISE 1. Tension too low 2. Service life exceeded	CRACKS AND SPALLING IN THE BELT BASE 1. Belt tension too low/high 2. Service life exceeded 3. Foreign object ingress	BELT BREAKS AFTER BRIEF RUNNING TIME 1. Tension cord damaged as a consequence of incorrect installation 2. Tension too high	BELT CONTAMINATED 1. Leakage from the engine or accessories (e.g. leakage of oil, anti-freeze etc.)	HARDENED, POLISHED FLANKS (DIFFERENT BELT TO BELT TENSION IN A SET) 1. Pulleys not aligned 2. Tension cord damaged by incorrect installation 3. Incorrect set composition	HIGH FLANK WEAR/ FLANKS EMBRITTLED 1. Slip is too high 2. Pulleys not aligned 3. Pulley grooves worn out
REMEDY							
1. Change belt, set the correct tension 2. Change belt and fit correctly	1. Check drive; align pulleys that are not in line and if necessary replace; change belt 2. Check tension; if necessary re-tension belt or change	1. Re-tension belt or change 2. Change belt	1. Change belt, set the correct tension 2. Change belt 3. Change belt	1. Change belt and fit correctly 2. Change belt, set the correct tension	1. Stop leakage, change belt	1. Check drive; align non-aligned pulleys and fit new belt set correctly 2. Change belt and fit correctly 3. Always change the complete belt set	1. Change belt, set the correct tension 2. Check drive; align pulleys that are not in line and if necessary replace 3. Align pulleys or replace; change belt

THE HIGH, MAINTENANCE-FREE EFFICIENCY MEANS THAT THE CONTINUOUS USE OF OPTIBELT **MARATHON 1** AND **MARATHON 2** BELTS RESULTS IN PARTICULARLY ECONOMICAL DRIVES.

OPTIBELT RIBBED BELTS **RBK**

					
HARDENED, POLISHED FLANKS 1. Incorrect tensioning 2. Belt tension cord damaged by incorrect installation	UNEVEN SECTION WEAR 1. Pulleys not aligned 2. High belt vibrations	BELT RUNNING NOISE 1. Tension too low 2. Service life exceeded	CRACKS AND SPALLING IN THE BELT RIBS 1. Belt tension too low/high 2. Service life exceeded 3. Foreign bodies	BELT BREAKS AFTER A SHORT RUNNING TIME 1. Tension cord damaged as a consequence of incorrect installation 2. Tension too high	BELT CONTAMINATED 1. Leakage from the engine or the accessories (e.g. leakage of oil, anti-freeze etc.)
REMEDY					
1. Change belt, set the correct tension 2. Change belt and fit correctly	1. Check drive; align pulleys that are not in line and if necessary replace; change belt 2. Check tension; if necessary re-tension belt or change	1. Re-tension belt or change 2. Change belt	1. Change belt, set the correct tension 2. Change belt 3. Change belt	1. Change belt and fit correctly 2. Change belt, set the correct tension	1. Stop leakage, change belt

OPTIBELT TIMING BELTS **ZRK**

		
NOISE 1. Tension too high: belt howls, whistles 2. Tension too low: belt hits the drive guard	TEETH AND FABRIC HAVE BECOME DETACHED FROM THE CARCASE 1. Leakage from the engine or the engine accessories (e.g. leakage of oil, anti-freeze etc.)	DEFECTIVE SYSTEM COMPONENTS 1. Bearing play 2. Damaged running surfaces
REMEDY		
1. Set the correct tension 2. Set the correct tension	1. Stop leakage, change belt	1. Change the guide idler, tension roller and/or the guide roller 2. Change the guide idler, tension roller and/or the guide roller
		
WEAR OF THE PULLEY TEETH/ BASE CRACKS AND STRIPPED TEETH 1. Tension too high/low 2. Foreign body ingress 3. Jammed timing belt or idler(a)	EDGE WEAR 1. Pulley/idler shafts are not parallel; belt runs against pulley flanges 2. Pulley/idlers are out of line; belt runs against pulley flanges 3. Flanged pulley has a defective flange 4. Pulley/idler bearings have too much play	TOOTH DAMAGE 1. Foreign body inside timing belt 2. Timing belt pulley tooth defect caused by foreign object or tools during installation 3. Timing belt damaged prior to or during installation
REMEDY		
1. Change belt, set the correct tension 2. Remove the foreign body, check that the drive guard sits correctly 3. Determine cause (e.g. defective bearing) and rectify, change belt	1. Check drive; align pulleys that are not in line and if necessary replace; change belt 2. Check drive; align pulleys that are not in line and if necessary replace; change belt 3. Replace components where necessary 4. Replace components where necessary	1. Remove the foreign body, change belt, check that the drive guard is fitted correctly 2. Replace damaged timing belt pulleys, change belt and install correctly 3. Change belt and fit correctly
		
TOP SURFACE TEARS 1. Ambient temperature too high/low 2. Influence of contamination 3. Back idler bearing worn or falling 4. Ageing	TIMING BELT BREAKAGE 1. Foreign object in drive 2. Influence of contamination 3. Pre-tension too high 4. Belt crimping prior to or during installation	WEAR OF THE TOOTH FACING FABRIC 1. Tension set too high 2. Worn timing belt pulley
REMEDY		
1. Determine cause (e.g. check engine cooling) and rectify, change belt 2. Change belt, check that the guard is fitted correctly 3. Renew idler, change belt 4. Change belt	1. Remove foreign object/media, change belt 2. Change belt, check that the guard is fitted correctly 3. Change belt, set the correct tension 4. Change belt and fit correctly	1. Change belt, set the correct tension 2. Replace timing belt pulley, change belt

“So your car purrs like a kitten.”

Michael Buchholz, 33,
mechatronics technician

