



IPMBA Bicycle Replacement Guidelines

Many bike unit members have inquired, “When should a patrol bike be replaced?” The answer is rather ambiguous – it largely depends upon a number of factors, such as material, age and condition of the frame, fork, wheels, and components. It is recommended that fleet bikes that have been heavily used and are older than five years should be replaced. If little or no periodic maintenance is performed on the bikes, they may need to be replaced sooner.

The most important item to consider when deciding to replace or repair a newer bike is the frame. Frames should be inspected frequently, during routine service or at the least annually, by a qualified bike mechanic for cracks. Usually, if the frame is in good shape, everything else can be repaired or replaced. If the frame is damaged, it should be replaced. Some brands offer lifetime warranties and will replace broken frames. Parts from the damaged frame, if they are still serviceable, can be used on the new frame. However, because of changing technology and industry standards, replacement is often the best option for a frame that is more than five years old.

The second most important item to consider for replacement is the fork. Checking for cracks and misalignment problems will prevent a catastrophic failure and rider injury. Check for internals that leak and damaged seals. A qualified bike mechanic will be able to identify internal and external damage, and can provide an estimate for cost of repair vs. replacement.

Wheels should be inspected and maintained often as well. Tension and trueness are both important in preventing failure or poor wear that can affect brakes and drivetrain performance. The component group, or the mechanical parts of the bicycle – drivetrain (e.g. shifters, cassette, front and rear derailleurs, the crank set, and the chain) and brakes – require routine, preventive maintenance to ensure the longevity of the fleet.

A qualified bike mechanic (either in-house or at a bike shop) should maintain and inspect the bikes on an ongoing basis. Only properly trained bike mechanics should be charged with the responsibility of maintaining the bike fleet; if the bikes are to be cared for in the motor pool, the fleet mechanics should be cross-trained as bike mechanics.

Warranty cards should be returned to the bike company to ensure timely response for any frame problems that arise. Records of purchase, repair, and regular maintenance should be kept to ensure the bikes are in proper working order at all times and to determine when they should be replaced. These records can help guide the decision whether it is more economical to repair or replace a bike. As with an automobile, the costs of maintenance can eventually outweigh the costs of replacement.

The following is a suggested list of parts to keep in stock and parts to order as needed. This list is suitable for departments without in-house mechanics:

In-Stock

Tires and tubes
Patches and glue
Pedals, toe clips and straps
Brake pads
Grips
Cables and housing
Assorted fasteners for racks, bottle cages and fenders
Saddles (ergonomic and gender-specific as needed)

As-Needed

Handlebars
Seatposts
Wheels (front and rear)

The following is a list of parts to keep in stock and parts to order as needed (in addition to the above-listed items) for departments with in-house mechanics. Only a qualified mechanic should install and/or repair these items due to the risks of rider injury if the repairs are done incorrectly.

In-Stock

Spokes (of proper length and gauge)
Ball bearings
Cables & housing (brake & shifter)
Ferrules for cable housing
Cable end-caps
Chains*
Front chainrings*
Rear cassettes*

As-Needed

Rear derailleur
Forks
Crank arms
Bottom brackets

*These drivetrain items should be replaced at the same time.

Note: these guidelines assume that the patrol bikes are, at minimum, mid-range bicycles from reputable manufacturers. Inferior bicycles are never acceptable for patrol work. To maximize the life span of the department fleet, bikes should be kept clean and well-maintained at all times.