

EMPLOYMENT SKILLS AND KNOWLEDGE INVENTORIES

Rowan Burns – As at 20 October 2006

BICYCLE RETAIL AND MECHANICS

HISTORY

1. Started riding bicycles seriously in 1997, completed a major tour (crossing of the Nullarbor Plain from Perth to Adelaide) and became a bicycle commuter.
2. Completed a Certificate IV in Small Business Management to set up a small tourism business involving bicycle tours and hire.
3. Completed all maintenance and repairs on bicycle fleet, to build up a great knowledge of intermediate bicycle mechanics.
4. Continued maintenance and repairs of personal bicycles (six) including building up from scratch several using new and used components.
5. Developed basic and intermediate training course in bicycle mechanics for CyclingSouth and delivered to the public.
6. Able to strip down and rebuild from bare frame.
7. Knowledge of critical areas such as chain wear, bearing preload and adjustment, wheel building and truing, brake adjustment, bottom bracket renewal, gear replacement, etc.

SKILLS AND KNOWLEDGE INVENTORY

1. **Bearings**
 - 1.1. Wear assessment,
 - 1.2. Service (clean, repack, rebuild)
 - 1.3. Replacement (bearing type, quality)
 - 1.4. Adjustment (preload)
2. **Frame**
 - 2.1. Measurement and assessment
 - 2.2. Basic repairs (replacement of Rivnuts, straightening dropouts)
 - 2.3. Handlebar integrity
3. **Wheels**
 - 3.1. Building from scratch (hub dimensions, rim dimensions, spoke length and specifications)
 - 3.2. Truing (tolerance, roundness, lateral)
4. **Components**
 - 4.1. Brake assessment, replacement and adjustment
 - 4.2. Headset assessment, replacement and adjustment
 - 4.3. Shifting assessment, replacement and adjustment, including front and rear derailleurs
 - 4.4. Front and rear suspension (assessment and replacement, but only small amount of servicing undertaken)
 - 4.5. Pedal and crank assessment, replacement and adjustment
5. **Accessories**
 - 5.1. Advice of application for particular uses (racing, road, track, touring, fixed-gear/single-speed, commuting, MTB, recreation, folding, recumbent)
 - 5.2. Fitting of accessories
 - 5.3. Spare parts advice and sales
6. **Bicycle selection**
 - 6.1. Type suitable for intended range of riding
 - 6.2. Fit and adjustment (seat height and fore-aft adjustment, handlebar adjustment)
 - 6.3. Swap-out or upgrade of components to rider specification
7. **Riding skills**
 - 7.1. Advice on basic riding skills for novices
 - 7.2. Design of in-house cycling and repair courses for customers
 - 7.3. Design of in-house advisory pamphlets