

MFG: VEKOMA
NAME: ROLLER COASTER

TYPE: NON-KIDAC





Inspection of Vekoma International Roller Coasters

The attached information comes directly from the Vekoma International maintenance manuals for the Mark 1200 roller coaster train and the Junior Coaster train and ride.

These inspection procedures should be considered SAMPLES and not used as the complete list of necessary and required maintenance items. Each roller coaster from Vekoma has specific requirements for that particular coaster. The inspector should always refer to the maintenance manuals and procedures for that roller coaster. These SAMPLES are intended to give the inspector a basic idea of the procedures and frequencies required for a typical Mark 1200 and Junior Coaster.

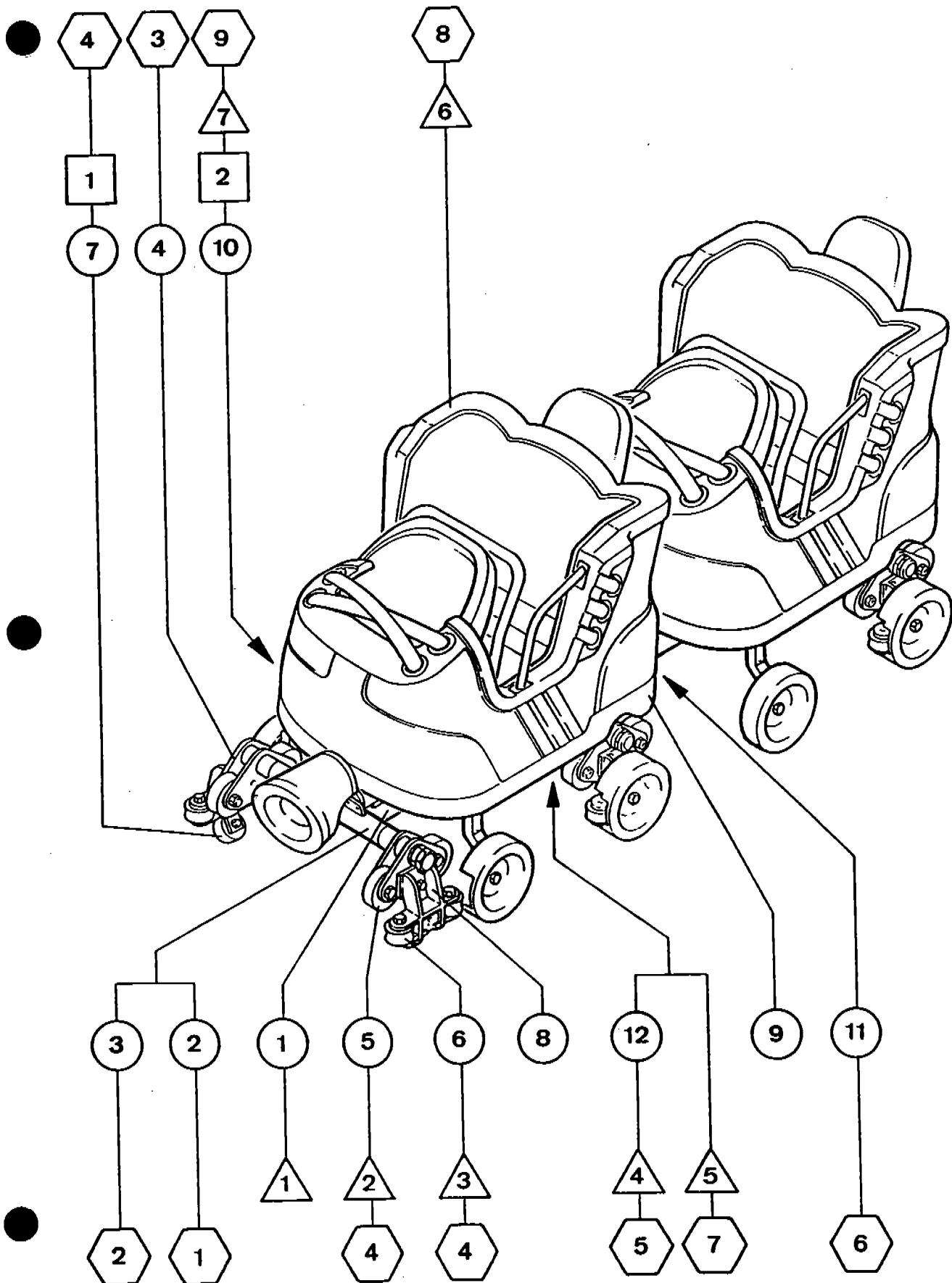
1 INSPECTION AND LUBRICATION

Inspection and lubrication schedule

| pos.- No. | Unit - inspection/lubrication | Page |
|--|--|------|
| daily  | | |
| 1 | Brake fin - condition, securing | 1-3 |
| 2 | Main axle - securing | 1-3 |
| 3 | Main bearing - locking, lubrication | 1-3 |
| 4 | Wheel carrier - locking, lubrication | 1-4 |
| 5 | Road wheel - locking, running tread | 1-5 |
| 6 | Guide wheel - locking, running tread | 1-5 |
| 7 | Upstop wheel - locking, running tread | 1-6 |
| 8 | Guide and upstop wheel support - locking | 1-7 |
| 9 | Floor - securing | 1-7 |
| 10 | Ratchet - functional check | 1-7 |
| 11 | Coupling - locking, lubrication | 1-8 |
| 12* | Shock absorber - securing | 1-9 |
| weekly  | | |
| 1 | Upstop wheel - smooth running | 1-10 |
| 2 | Ratchet - adjustment | 1-10 |
| monthly  | | |
| 1 | Brake fin - thickness | 1-11 |
| 2 | Road wheel - smooth running | 1-11 |
| 3 | Guide wheel - smooth running | 1-11 |
| 4 | Chassis - welded seams | 1-12 |
| 5* | Shock absorber - wear and tear | 1-12 |
| 6 | Polyester and show parts - securing | 1-13 |
| 7 | Ratchet - lubrication | 1-13 |
| yearly  | | |
| 1 | Main axle - rust, cracks | 1-14 |
| 2 | Main bearing - wear and tear | 1-15 |
| 3 | Wheel carrier - welded seams, bearing bushes | 1-15 |
| 4 | Wheel bearing - wear and tear, lubrication | 1-16 |
| 5 | Chassis - welded seams | 1-16 |
| 6 | Coupling - wear and tear | 1-16 |
| 7* | Shock absorber - condition | 1-17 |
| 8 | Polyester - cracks | 1-17 |
| 9 | Ratchet - rack, toothed segment | 1-17 |





* Does not apply to the front axle of the leading coach.

JUNIOR COASTER



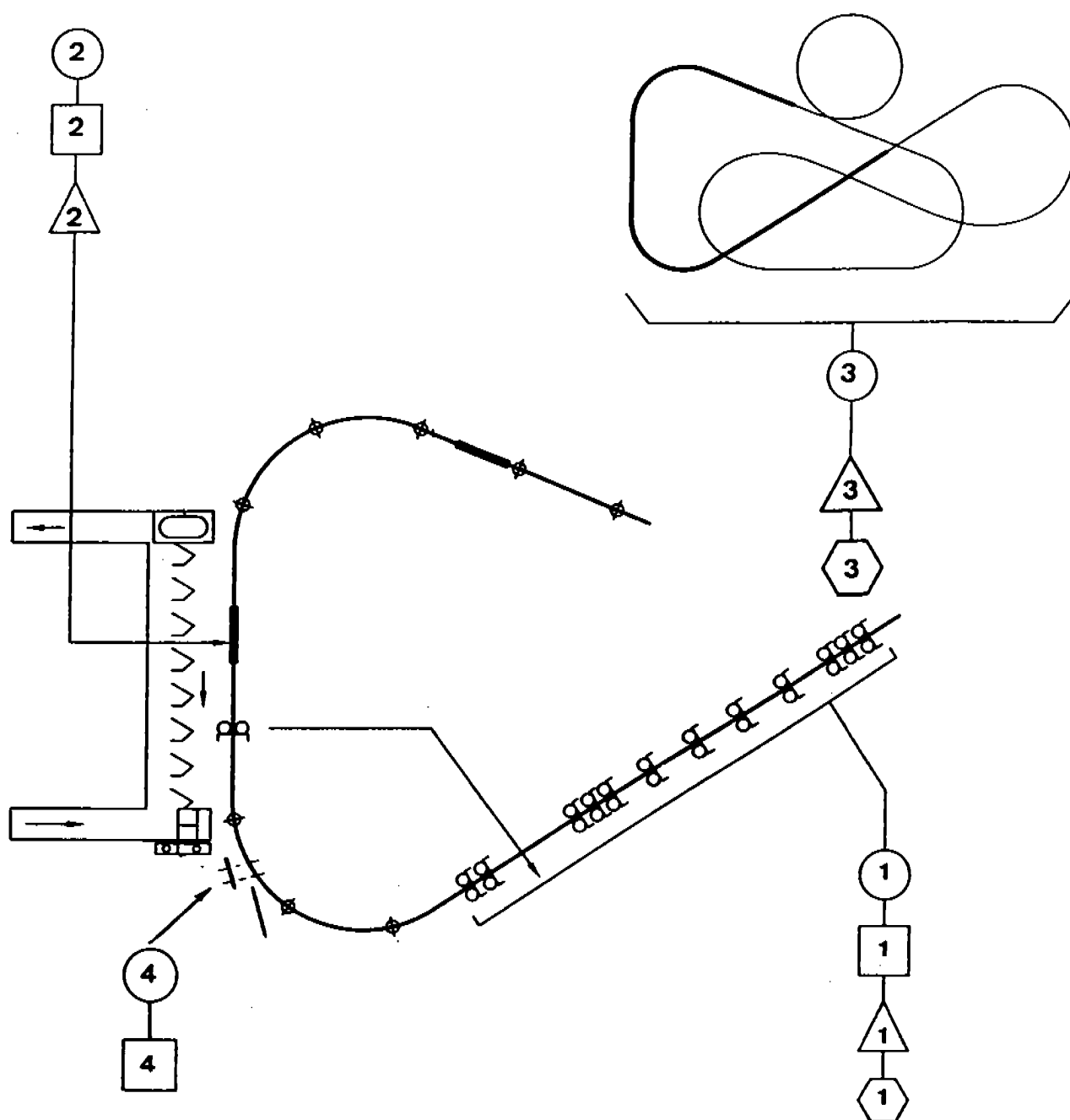
2 INSPECTION AND LUBRICATION

Inspection and lubrication schedule

| pos. - No. | item - inspection / lubrication | page |
|---|--|------|
| daily | | |
|  1 | Boosters - securing of booster wheels, inspection of locking device, sound of bearings, safety cable, securing, leakage | 2-3 |
| 2 | Restraint release system - operation, leakage/attachment of pneum. connections, draining of condensate | 2-4 |
| 3 | Ride - inspection for obstructions and obstacles | 2-5 |
| 4 | Switch - operation, securing of switch and check of sensors | 2-5 |
| weekly | | |
|  1 | Boosters - condition of booster tyres, play of booster wheels | 2-6 |
| 2 | Restraint release system - mounting of synthetic guides and cylinder | 2-6 |
| monthly | | |
|  1 | Boosters - oil level check | 2-7 |
| 2 | Restraint release system - thickness of synthetic guides | 2-8 |
| 3 | Ride - condition of running pipes, * inspection of welded seams of track and columns, inspection of bolted connections, inspection of anchors and supports, locking of pipe connection | 2-8 |
| 4 | Switch - lubrication securing device, inspection of welds and smooth running of wheels | 2-10 |
| yearly | | |
|  1 | Boosters - condition of booster wheels, alignment of the boosters, oil change, securing of electrical connections | 2-11 |
| 2 | Ride - check of all pre-tensioned bolts | 2-12 |

- After 200 and 800 hours after taking into service a new track, after that every 3000 operating hours.
- * The inspection items marked with an asterisk only need to be carried out every six months.

JUNIOR COASTER - Ride CONTROLE EN SMERING







IMPORTANT !

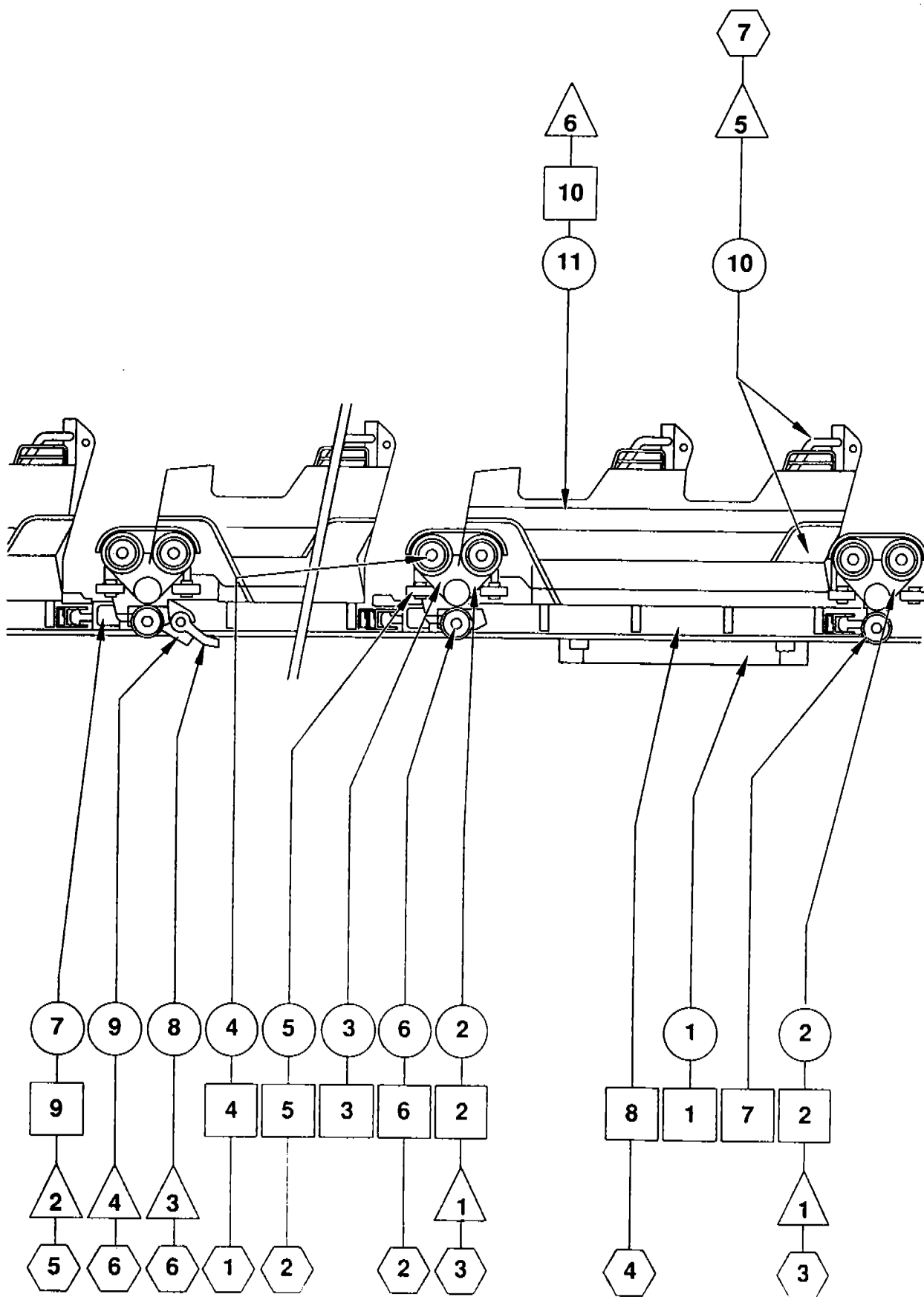
The maintenance crew must use the checklists and logbooks applicable to the attraction. Every inspection must be initialled by the supervisor of maintenance crew. Failing to keep the logbooks and checklists may result in **VEKOMA NOT** any longer taking **RESPONSIBILITY** for the attraction.

1 CONTROL AND LUBRICATION

Control and lubrication overview

| pos no. | component - control lubrication | page |
|---|---|------|
|  daily | | |
| 1 | Brake fin - condition, attachment | 1-3 |
| 2 | Main axle - attachment, check pivot pin, attachment of safety strap and two axis coupling pin | 1-3 |
| | Rear axle trailing coach - locking and lubrication spindle shaft, attachment of safety cable | 1-4 |
| 3 | Wheel carrier - attachment of top cover plate, lubrication, attachment of wheel fender | 1-5 |
| 4 | Road wheel - running tread, locking, oil level/leakage | 1-5 |
| 5 | Guide wheel - running tread, locking, oil level/leakage | 1-6 |
| 6 | Upstop wheel - running tread, locking, oil level/leakage | 1-7 |
| 7 | Coupling - attachment, locking of coupling pin, attachment of safety cable | 1-7 |
| 8 | Anti roll back dog - operation, locking of dog shaft, condition of bumper, condition of attachment, condition of synthetic bush | 1-8 |
| 9 | Chain dog - operation, locking of dog shaft, condition of attachment, condition of draw spring | 1-9 |
| 10 | Shoulder restraint - operation, attachment of handle shoulder brackets | 1-9 |
| 11 | Polyester body - attachment | 1-10 |
|  weekly | | |
| 1 | Brake fin - wear | 1-11 |
| 2 | Main axle - tension of spindle bolt, lubrication of pivot pins and cushion blocks | 1-11 |
| 3 | Wheel carrier - attachment/locking | 1-12 |
| 4 | Road wheel - smooth running, axial play | 1-12 |
| 5 | Guide wheel - smooth running, axial play | 1-12 |
| 6 | Upstop wheel - smooth running, axial play | 1-13 |
| 7 | Sensor shoe/upstop bracket - attachment | 1-13 |
| 8 | Chassis - cracks, paintwork | 1-13 |
| 9 | Coupling - lubrication, axial play, weld seams, paintwork | 1-14 |
| 10 | Polyester body - damage, attachment of railing | 1-14 |
|  monthly | | |
| 1 | Main axle - weld seams, paintwork | 1-15 |
| 2 | Coupling - turning moment second nut | 1-15 |
| 3 | Anti roll back dog - wear | 1-15 |
| 4 | Chain dog - wear | 1-16 |
| 5 | Shoulder restraint - lubrication, condition, operation, attachment | 1-16 |
| 6 | Polyester body - attachment of cushions and footboards, attachment of rear plates | 1-16 |
|  annual | | |
| 1 | Road wheel - condition of spindle, condition of aluminium, replace oil, axial play | 1-17 |
| 2 | Guide wheel/upstop wheel - condition of spindle, condition of aluminium, replace oil, axial play, oil catcher | 1-18 |
| 3 | Main axle - replace elasto springs, weld seams, axis spindles, wheel carriers, wheel carrier spindles | 1-19 |
| 4 | Chassis - weld seams | 1-19 |
| 5 | Coupling - wear, condition | 1-20 |
| 6 | Anti roll back dog/chain dog - condition | 1-21 |
| 7 | Shoulder restraint - clean, lubricate | 1-21 |

MK 1200 TRAIN CONTROL AND LUBRICATION





Inspection Checklist MK 1200 Train

SAMPLE

| | | | | | |
|--|-------------------|-------|-------------|-------------------------|---------|
| Customer : | Ride | | Serial nr. | Inspection date : | Remarks |
| Park/Adress : | Inspection period | | See section | Not inspected | |
| Shoulder restraint | | | | | |
| operation | 1 D | Yes | No | 1.1 10 | ..... |
| attachment handles shoulder bracket | 1 D | ..... | ..... | 1.1 10 | ..... |
| check lubrication | 1 M | ..... | ..... | 1.3 5 | ..... |
| condition, operation and attachment of moving components | 1 M | ..... | ..... | 1.3 5 | ..... |
| check for deformation and cracks | 1 W | ..... | ..... | 1.4 7 | ..... |
| Polyester body | | | | | |
| attachment of polyester body | 1 D | ..... | ..... | 1.1 11 | ..... |
| check for damage and cracks | 1 W | ..... | ..... | 1.2 10 | ..... |
| attachment of seat and buffer cushions and footboards | 1 M | ..... | ..... | 1.3 6 | ..... |
| attachment of rear plates | 1 M | ..... | ..... | 1.3 6 | ..... |
| Sensor shoe/upstop bracket | | | | | |
| attachment of upstop bracket | 1 W | ..... | ..... | 1.2 7 | ..... |
| attachment of sensor shoe | 1 W | ..... | ..... | 1.2 7 | ..... |
| Chassis | | | | | |
| check for cracks | 1 W | ..... | ..... | 1.2 8 | ..... |
| check paintwork | 1 W | ..... | ..... | 1.2 8 | ..... |
| Magnafix/colour penetrant inspection | 1 Y | ..... | ..... | 1.4 4 | ..... |

The MK 1200 Train is inspected according to this check list. The cases "not inspected" are discussed.
It's the owners responsibility to ensure that the MK 1200 Train is properly controlled, maintained and repaired.

Owner : Inspected by :
Date :