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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DUAL GAUGE TURNOUT INSPECTION – DETAILED** | | | | | | | | | | | | | | | | | | | | | |
| Location: Track: I.D. No.: | | | | | | | | | | | | | | | | | | | | | |
| Length: Date: Signature: | | | | | | | | | | | | | | | | | | | | | |
| All measurements in mm All speeds in km/h | | | | | | | | | | | | | | | | | | | | | |
| **ALL MESUREMENTS TO BE TAKEN AT POP MARKED LOCATIONS** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | **MEASUREMENT** | | | **RESPONSES** | | | | | | | | **COMMENTS** | | |
| **POINTS** | | | | | | | | | | | | | | | | | | | | | |
| Gauge (at end of stock rail) | | | | | | SG | |  | | | **Tight:** <1429/1592 speed 10 and pilot;1429 to 1431/1592 to 1594 speed 20  **Wide:** >1455/1620 speed 10 and pilot; 1443 to 1455/1615 to 1620 Speed 30;  Note, however, that tolerance on gauge at this location is governed by gauge at the noses of the K assembly measured with the BG and SG crossing gauges | | | | | | | |  | | |
| BG | |  | | |
| Switch Open Throw | | | | | | CR | |  | | | 85 to <95 monitor; 80 to 84 speed 20/20 and monitor; <80 speed 10/10 and pilot trains. | | | | | | | |  | | |
| SG | |  | | |
| Switch Blade Gap : each blade against its stock rail | | | | | | CR | |  | | | >3mm speed 20 and prioritise remedial action | | | | | | | |  | | |
| SG | |  | | |
| BG | |  | | |
| Switch Blade Damage: check all three switch blades | | | | | | CR | |  | | | **Damage deeper than 19mm from running surface**  50 to 100 long – profile  ≥100 long - speed 10/10 and pilot trains | | | | | | | |  | | |
| SG | |  | | |
| BG | |  | | |
| Switch Width at Tip:  Check all three switch blades | | | | | | CR | |  | | | <5 monitor; 5 to 9 speed 20/20 and monitor;  >9speed 10/10 and pilot trains | | | | | | | |  | | |
| SG | |  | | |
| BG | |  | | |
| Switch Crippled | | | | | | | |  | | | Speed 20 | | | | | | | |  | | |
| Metal Flow – Switch blade and running rails | | | | | | | |  | | | **>3 metal flow requires grinding**  3 to 4 speed 30  > 4 speed 10 | | | | | | | |  | | |
| Spreader Bars | | | | | | | |  | | | Broken/Missing/bent speed 10/10 and pilot trains | | | | | | | |  | | |
| Throat gap | | | | | | CR | |  | | | <40 – immediate appropriate action | | | | | | | |  | | |
|  | |  | | |
| BG | |  | | |
| Heel block condition | | | | | | Left | |  | | | Missing bolt – speed 40  Cracked block – Speed 40 | | | | | | | |  | | |
| Right | |  | | |
| Rail Brace/Chair | | | | | | Left | |  | | | Cracked/Loose – monitor;  Broken/ineffective:  1 only – monitor; 2 consecutive – speed 20 and monitor ;> 2 consecutive speed 10 and pilot trains. | | | | | | | |  | | |
| Right | |  | | |
| Points Stops | | | | | | Left | |  | | | Cracked/Loose – monitor;  Missing/ineffective:  1 only speed 20; 2 consecutive – speed 10 and pilot trains | | | | | | | |  | | |
| Right | |  | | |
| Ineffective Bearers/Fasteners  (In critical area) | | | | | | | |  | | | 1 only – monitor; 2 consecutive speed 40; > 2 consecutive speed 10 and pilot trains | | | | | | | |  | | |
| Switch/Wheel contact area | | | | | | | |  | | | Report if switch/stock needs grinding and prioritise | | | | | | | |  | | |
| **Additional checks for type 29 and 30 turnouts to prevent SG turnout move from derailing at the end of the short stock rail** | | | | | | | | | | | | | | | | | | | | | |
| Gauge from common switch blade to short stock rail near the end of the short stock rail switches set for the turnout | | | | | | | |  | | | 1438 to 1440 monitor; >1440 speed 20 | | | | | | | |  | | |
| Gauge from common rail turnout blade to the BG blade opposite just past wheel transfer off the short stock rail; switches set for the turnout | | | | | | | |  | | | >1485 – Plan corrective action | | | | | | | |  | | |
| Gap between the two blades on the dual rail side. | | | | | | | |  | | | >100 - Plan corrective action | | | | | | | |  | | |
| Tie Bar | | | | Between CR turnout blade and opposite BG | | | |  | | | If tie bar is missing, broken or ineffective – speed 10 and pilot trains | | | | | | | |  | | |
| Short tie bar between the SG and BG | | | |  | | | If tie bar is missing, broken or ineffective prioritise remedial actions. | | | | | | | |
| BG blade against the short stock rail -measure gap | | | | | | | |  | | | >2mm prioritise remedial action | | | | | | | |  | | |
| **K CROSSING** | | | | | | | | | | | | | | | | | | | | | |
| Gauge (Front of Nose SG and at the Knuckle for BG) | | | | | | SG | |  | | | **Tight** <1428 to 1426 speed 20; > 1426 speed 10 and pilot trains  **Wide** >1430 to 1432 speed 20; >1432 speed 10 and pilot trains | | | | Use both “worn wheel” and “full wheel” sides of crossing gauge and measure the extent of fouling by both SG and BG wheels | | | |  | | |
| BG | |  | | |
| Check Rail Effectiveness | | | | | | SG | |  | | | <1382 speed 10 and pilot trains; 1382 to <1386 speed 20; 1386 to <1389 monitor | | | | | | | |  | | |
| Check Rail Flange way Width | | | | | | | |  | | | >48 to 50 monitor;>50 to 53 speed 20; >53 speed 10 and pilot trains | | | | | | | |  | | |
| Crossing Nose Vertical Wear | | | | | | | |  | | | Report if nose needs repair and prioritise | | | | | | | |  | | |
| Crossing Nose Break width  (Within transfer length) | | | | | | | |  | | | 15 to 20 – monitor; >20 to 25 – speed 40;  >25 – speed 10 and pilot trains | | | | | | | |  | | |
| Spacer Blocks | | | | | | | |  | | | Broken/cracked - Monitor | | | | | | | |  | | |
| Check Rail Bolts | | | | | | | |  | | | Loose – Monitor; 1 missing/ineffective – replace; 2 missing/ineffective – speed 40; 3 missing/ineffective – speed 10 and pilot trains | | | | | | | |  | | |
| Crossing Bolts | | | | | | | |  | | | Loose – Monitor; 1 missing/ineffective – replace; 2 missing/ineffective – speed 40; 3 missing/ineffective – speed 10 and pilot trains | | | | | | | |  | | |
| Midpoint of lead | | | | | | | | | | | | | | | | | | |  | | |
|  | | | Straight | | | SG | |  | | | SG: >1455 apply plain track geometry responses; 1427 to 1429 Speed 60/65 and monitor; 1425 to 1426 Speed 20/20 and monitor; <1425 10/10 and pilot trains.  BG: > 1620 Speed 20/20 and monitor; 1592 to 1597 60/65 and monitor ;< 1592 10/10 and pilot trains. | | | | | | | |  | | |
| BG | |  | | |
| Diverge | | | SG | |  | | |
| BG | |  | | |
| V Crossing | | | | | | | | | | | | | | | | | | | | | |
| Gauge | | | | | | Straight SG | |  | | | SG: >1455 apply plain track geometry responses; 1427 to 1429 Speed 60/65 and monitor; 1425 to 1426 Speed 20/20 and monitor; <1425 10/10 and pilot trains.  BG: > 1620 speed 20/20 and monitor; 1592 to 1597 60/65 and monitor ;< 1592 10/10 and pilot trains. | | | | | | | |  | | |
| Diverge SG | |  | | |
| Straight BG | |  | | |
| Diverge BG | |  | | |
| Check Rail Effectiveness | | | Straight | | | SG | |  | | | SG: 1389 to 1395 OK  BG: 1556 to 1562 OK  If check rail gauge is outside limits, measure track gauge and check rail flange way to determine corrective action | | | | | | | |  | | |
| BG | |  | | |
| Diverge | | | SG | |  | | |
| BG | |  | | |
| Check Rail Flange way Width | | | | | | Straight | |  | | | 40 to 46 OK; If check rail gauge is outside limits, measure track gauge and check rail flange way to determine corrective action. | | | | | | | |  | | |
| Diverge | |  | | |
| Check Rail Bolts | | | | | | Straight | |  | | | Loose – Monitor; 1 missing/ineffective – replace; 2 missing/ineffective – speed 40; 3 missing/ineffective – speed 10 and pilot trains | | | | | | | |  | | |
| Diverge | |  | | |
| Check for nose wear at impact zones | | | | | | | |  | | | Report crushing or wear within 175mm of the nose | | | | | | | |  | | |
| Wing Rails Vertical Wear | | | | | | | |  | | | **5mm – report for weld build up, limits close to 10mm are hard to rebuild.**  5 to <9 – monitor;9 to <11 – speed 20; >11 – speed 10 and pilot trains | | | | | | | |  | | |
| General -Response assessment by competent person | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | OK- Y/N | | Comments | | |  | | | | | | OK – Y/N | | Comments | | |
| Drainage | | | | | |  | |  | | | Rails | | | | | |  | |  | | |
| Bearers/Fasteners | | | | | |  | |  | | | Points Lubrication | | | | | |  | |  | | |
| Ballast | | | | | |  | |  | | | Gauge face lubrications | | | | | |  | |  | | |
| Alignment and Top | | | | | |  | |  | | | Wear faces of guard rails lubrications | | | | | |  | |  | | |
| Connecting rods | | | | | |  | |  | | | Anchors | | | | | |  | |  | | |
| **TIMBERS REQUIRED (optional)** | | | | | | | | | | | | | | | | | | | | |
|  | |  | | |  | |  | |  |  | |  |  |  | |  | |  | |  |  |
|  | |  | | |  | |  | |  |  | |  |  |  | |  | |  | |  |  |