

APPENDIX C
Train Accident Cause Codes

TRACK, ROADBED AND STRUCTURES

Roadbed

- T001 Roadbed settled or soft
- T002 Washout/rain/slide/flood/snow/ice damage to track
- T099 Other roadbed defects (Provide detailed description in narrative)

Track Geometry

- T101 Cross level of track irregular (at joints)
- T102 Cross level of track irregular (not at joints)
- T103 Deviation from uniform top of rail profile
- T104 Disturbed ballast section
- T105 Insufficient ballast section
- T106 Superelevation improper, excessive, or insufficient
- T107 Superelevation runoff improper
- T108 Track alignment irregular (other than buckled/sunkink)
- T109 Track alignment irregular (buckled/sunkink)
- T110 Wide gage (due to defective or missing crossties)
- T111 Wide gage (due to defective or missing spikes or other rail fasteners)
- T112 Wide gage (due to loose, broken, or defective gage rods)
- T113 Wide gage (due to worn rails)
- T199 Other track geometry defects (Provide detailed description in narrative)

Rail, Joint Bar and Rail Anchoring

- T201 Broken Rail - Bolt hole crack or break
- T202 Broken Rail - Base
- T203 Broken Rail - Weld (plant)
- T204 Broken Rail - Weld (field)
- T205 Defective or missing crossties (use code T110 if results in wide gage)
- T206 Defective spikes or missing spikes or other rail fasteners (use code T111 if results in wide gage)
- T207 Broken Rail - Detail fracture from shelling or head check
- T208 Broken Rail - Engine burn fracture
- T210 Broken Rail - Head and web separation (outside joint bar limits)
- T211 Broken Rail - Head and web separation (within joint bar limits)
- T212 Broken Rail - Horizontal split head
- T213 Joint bar broken (compromise)
- T214 Joint bar broken (insulated)
- T215 Joint bar broken (noninsulated)
- T216 Joint bolts, broken, or missing
- T217 Mismatched rail-head contour
- T218 Broken Rail - Piped rail
- T219 Rail defect with joint bar repair

APPENDIX C - Continued

- T220 Broken Rail - Transverse/compound fissure
- T221 Broken Rail - Vertical split head
- T222 Worn rail
- T223 Rail Condition - Dry rail, freshly ground rail.
- T299 Other rail and joint bar defects (Provide detailed description in narrative)

Frogs, Switches and Track Appliances

- T301 Derail, defective
- T302 Expansion joint failed or malfunctioned
- T303 Guard rail loose/broken or mislocated
- T304 Railroad crossing frog, worn or broken
- T305 Retarder worn, broken, or malfunctioning
- T306 Retarder yard skate defective
- T307 Spring/power switch mechanism malfunction
- T308 Stock rail worn, broken or disconnected
- T309 Switch (hand operated) stand mechanism broken, loose, or worn
- T310 Switch connecting or operating rod is broken or defective
- T311 Switch damaged or out of adjustment
- T312 Switch lug/crank broken
- T313 Switch out of adjustment because of insufficient rail anchoring
- T314 Switch point worn or broken
- T315 Switch rod worn, bent, broken, or disconnected
- T316 Turnout frog (rigid) worn, or broken
- T317 Turnout frog (self guarded), worn or broken
- T318 Turnout frog (spring) worn, or broken
- T319 Switch point gapped (between switch point and stock rail)
- T399 Other frog, switch and track appliance defects (Provide detailed description in narrative)

Other Way and Structure

- T401 Bridge misalignment or failure
- T402 Flangeway clogged
- T403 Engineering design or construction
- T404 Catenary system defect
- T499 Other way and structure defect (Provide detailed description in narrative)

SIGNAL AND COMMUNICATION

- S001 Automatic cab signal displayed false proceed
- S002 Automatic cab signal inoperative
- S003 Automatic train control system inoperative
- S004 Automatic train-stop device inoperative
- S005 Block signal displayed false proceed
- S006 Classification yard automatic control system switch failure
- S007 Classification yard automatic control system retarder failure
- S008 Fixed signal improperly displayed (defective)

APPENDIX C - Continued

- S009 Interlocking signal displayed false proceed
- S010 Power device interlocking failure
- S011 Power switch failure
- S012 Radio communication equipment failure
- S013 Other communication equipment failure
- S014 Computer system design error (vendor)
- S015 Computer system configuration/management error (vendor)
- S016 Classification yard automatic control system - Inadequate or insufficient control (e.g., automatic cycling, other software/programming deficiencies, etc.)
- S099 Other signal failures (Provide detailed description in narrative)
- S101 Remote control transmitter defective
- S102 Remote control transmitter, loss of communication.
- S103 Radio controlled switch communication failure
- S104 Radio controlled switch not locked effectively

MECHANICAL AND ELECTRICAL FAILURES

Brakes

- E00C Air hose uncoupled or burst
- E00L Air hose uncoupled or burst (LOCOMOTIVE)
- E01C Hydraulic hose uncoupled or burst
- E01L Hydraulic hose uncoupled or burst (LOCOMOTIVE)
- E02C Broken brake pipe or connections
- E02L Broken brake pipe or connections (LOCOMOTIVE)
- E03C Obstructed brake pipe (closed angle cock, ice, etc.)
- E03L Obstructed brake pipe (closed angle cock, ice, etc.) (LOCOMOTIVE)
- E04C Other brake components damaged, worn, broken, or disconnected
- E04L Other brake components damaged, worn, broken, or disconnected (LOCOMOTIVE)
- E05C Brake valve malfunction (undesired emergency)
- E05L Brake valve malfunction (undesired emergency) (LOCOMOTIVE)
- E06C Brake valve malfunction (stuck brake, etc.)
- E06L Brake valve malfunction (stuck brake, etc.) (LOCOMOTIVE)
- E07C Rigging down or dragging
- E07L Rigging down or dragging (LOCOMOTIVE)
- E08C Hand brake (including gear) broken or defective
- E08L Hand brake (including gear) broken or defective (LOCOMOTIVE)
- E0HC Hand brake linkage and/or connections broken or defective
- E0HL Hand brake linkage/Connections broken/defective (LOCOMOTIVE)
- E09C Other brake defects, cars (Provide detailed description in narrative)
- E09L Other brake defects, (Provide detailed description in narrative) (LOCOMOTIVE)
- E10L Computer controlled brake communication failure (LOCOMOTIVE)

Trailer Or Container On Flatcar

- E11C Broken or defective tiedown equipment
- E12C Broken or defective container
- E13C Broken or defective trailer

APPENDIX C - Continued

E19C Other trailer or container on flat car defects (Provide detailed description in narrative)

Body

- E20C Body bolster broken or defective
- E20L Body bolster broken or defective (LOCOMOTIVE)
- E21C Center sill broken or bent
- E21L Center sill broken or bent (LOCOMOTIVE)
- E22C Draft sill broken or bent
- E22L Draft sill broken or bent (LOCOMOTIVE)
- E23C Center plate broken or defective
- E23L Center plate broken or defective (LOCOMOTIVE)
- E24C Center plate disengaged from truck (car off center)
- E24L Center plate disengaged from truck unit/off center (LOCOMOTIVE)
- E25C Center pin broken or missing
- E25L Center pin broken or missing (LOCOMOTIVE)
- E26C Center plate attachment defective
- E26L Center plate attachment defective (LOCOMOTIVE)
- E27C Side sill broken
- E27L Side sill broken (LOCOMOTIVE)
- E29C Other body defects, (CAR) (Provide detailed description in narrative)
- E29L Other body defects, (LOCOMOTIVE) (Provide detailed description in narrative)

Coupler and Draft System

- E30C Knuckle broken or defective
- E30L Knuckle broken or defective (LOCOMOTIVE)
- E31C Coupler mismatch, high/low
- E31L Coupler mismatch, high/low (LOCOMOTIVE)
- E32C Coupler drawhead broken or defective
- E32L Coupler drawhead broken or defective (LOCOMOTIVE)
- E33C Coupler retainer pin/cross key missing
- E33L Coupler retainer pin/cross key missing (LOCOMOTIVE)
- E34C Draft gear/mechanism broken or defective (including yoke)
- E34L Draft gear/mechanism broken/defective (including yoke) (LOCOMOTIVE)
- E35C Coupler carrier broken or defective
- E35L Coupler carrier broken or defective (LOCOMOTIVE)
- E36C Coupler shank broken or defective (includes defective alignment control)
- E36L Coupler shank broken or defective (includes defective includes defective alignment control) (LOCOMOTIVE)
- E37C Failure of articulated connectors
- E37L Failure of articulated connectors (LOCOMOTIVE)
- E39C Other coupler and draft system defects, (CAR) (Provide detailed description in narrative)
- E39L Other coupler and draft system defects, (LOCOMOTIVE) (Provide detailed description in narrative)

Truck Components

APPENDIX C - Continued

- E40C Side bearing clearance insufficient
- E40L Side bearing clearance insufficient (LOCOMOTIVE)
- E41C Side bearing clearance excessive
- E41L Side bearing clearance excessive (LOCOMOTIVE)
- E42C Side bearing(s) broken
- E42L Side bearing(s) broken (LOCOMOTIVE)
- E43C Side bearing(s) missing
- E43L Side bearing(s) missing (LOCOMOTIVE)
- E44C Truck bolster broken
- E44L Truck bolster broken (LOCOMOTIVE)
- E45C Side frame broken
- E45L Side frame broken (LOCOMOTIVE)
- E46C Truck bolster stiff, improper swiveling
- E4AC Gib Clearance (lateral motion excessive)
- E4BC Truck bolster stiff (failure to slew)
- E46L Truck bolster stiff, improper lateral or improper swiveling(LOCOMOTIVE)
- E47C Defective snubbing (including friction and hydraulic)
- E47L Defective snubbing (LOCOMOTIVE)
- E48C Broken, missing, or otherwise defective springs (including incorrect repair and/or installation)
- E48L Broken, missing, or otherwise defective springs (LOCOMOTIVE)
- E4TC Truck hunting
- E4TL Truck hunting (LOCOMOTIVE)
- E49C Other truck component defects, including mismatched side frames (CAR) (Provide detailed description in narrative)
- E49L Other truck component defects, (LOCOMOTIVE) (Provide detailed description in narrative)

Axles and Journal Bearings

- E51C Broken or bent axle between wheel seats
- E51L Broken or bent axle between wheel seats (LOCOMOTIVE)
- E52C Journal (plain) failure from overheating
- E52L Journal (plain) failure from overheating (LOCOMOTIVE)
- E53C Journal (roller bearing) failure from overheating
- E53L Journal (roller bearing) failure from overheating- LOCOMOTIVE
- E54C Journal fractured, new cold break
- E54L Journal fractured, new cold break (LOCOMOTIVE)
- E55C Journal fractured, cold break, previously overheated
- E55L Journal fractured, cold break, previously overheated (LOCOMOTIVE)
- E59C Other axle and journal bearing defects (CAR) (Provide detailed description in narrative)
- E59L Other axle and journal bearing defects (LOCOMOTIVE) (Provide detailed description in narrative)

Wheels

- E60C Broken flange
- E60L Broken flange (LOCOMOTIVE)
- E61C Broken rim

APPENDIX C - Continued

- E61L Broken rim (LOCOMOTIVE)
- E62C Broken plate
- E62L Broken plate (LOCOMOTIVE)
- E63C Broken hub
- E63L Broken hub (LOCOMOTIVE)
- E64C Worn flange
- E64L Worn flange (LOCOMOTIVE)
- E65C Worn tread
- E65L Worn tread (LOCOMOTIVE)
- E66C Damaged flange or tread (flat)
- E66L Damaged flange or tread (flat) (LOCOMOTIVE)
- E67C Damaged flange or tread (build up)
- E67L Damaged flange or tread (build up) (LOCOMOTIVE)
- E68C Loose wheel
- E68L Loose wheel (LOCOMOTIVE)
- E6AC Thermal crack, flange or tread
- E6AL Thermal crack, flange or tread (LOCOMOTIVE)
- E69C Other wheel defects (CAR) (Provide detailed description in narrative)
- E69L Other wheel defects (LOCOMOTIVE) (Provide detailed description in narrative)

Locomotives

- E70L Running gear failure (LOCOMOTIVE)
- E71L Traction motor failure (LOCOMOTIVE)
- E72L Crank case or air box explosion (LOCOMOTIVE)
- E73L Oil or fuel fire (LOCOMOTIVE)
- E74L Electrically caused fire (LOCOMOTIVE)
- E75L Current collector system (LOCOMOTIVE)
- E76L Remote control equipment inoperative (LOCOMOTIVE)
- E77L Broken or defective swing hanger or spring plank (LOCOMOTIVE)
- E78L Pantograph defect (LOCOMOTIVE)
- E7AL On-board computer - failure to respond (LOCOMOTIVE)
- E7BL Third rail shoe or shoe beam (LOCOMOTIVE)
- E79L Other locomotive defects (Provide detail description in narrative)

Doors

- E80C Box car plug door open
- E81C Box car plug door, attachment defective
- E82C Box car plug door, locking lever not in place
- E83C Box car door, other than plug, open
- E84C Box car door, other than plug, attachment defective
- E85C Bottom outlet car door open
- E86C Bottom outlet car door attachment defective
- E89C Other car door defects (Provide detail description in narrative)

General Mechanical and Electrical Failures

APPENDIX C - Continued

- E99C Other mechanical and electrical failures, (CAR) (Provide detailed description in narrative)
E99L Other mechanical and electrical failures, (LOCOMOTIVE) (Provide detailed description in narrative)

TRAIN OPERATION - HUMAN FACTORS

Brakes, Use of

- H008 Improper operation of train line air connections (bottling the air)
H017 Failure to properly secure engine(s) (railroad employee)
H018 Failure to properly secure hand brake on car(s) (railroad employee)
H019 Failure to release hand brakes on car(s) (railroad employee)
H020 Failure to apply sufficient number of hand brakes on car(s) (railroad employee)
H021 Failure to apply hand brakes on car(s) (railroad employee)
H022 Failure to properly secure engine(s) or car(s) (non railroad employee)
H025 Failure to control speed of car using hand brake (railroad employee)
H099 Use of brakes, other (Provide detailed description in narrative)

Employee Physical Condition

- H101 Impairment of efficiency or judgment because of drugs or alcohol
H102 Incapacitation due to injury or illness
H103 Employee restricted in work or motion
H104 Employee asleep
H199 Employee physical condition, other (Provide detailed description in narrative)

Flagging, Fixed, Hand and Radio Signals

- H201 Blue Signal, absence of
H202 Blue Signal, imperfectly displayed
H205 Flagging, improper or failure to flag
H206 Flagging signal, failure to comply
H207 Hand signal, failure to comply
H208 Hand signal improper
H209 Hand signal, failure to give/receive
H210 Radio communication, failure to comply
H211 Radio communication, improper
H212 Radio communication, failure to give/receive
H217 Failure to observe hand signals given during a wayside inspection of moving train
H218 Failure to comply with failed equipment detector warning or with applicable train inspection rules.
H219 Fixed signal (other than automatic block or interlocking signal), improperly displayed.
H220 Fixed signal (other than automatic block or interlocking signal), failure to comply.
H221 Automatic block or interlocking signal displaying a stop indication - failure to comply.*
H222 Automatic block or interlocking signal displaying other than a stop indication - failure to comply.*
H299 Other signal causes (Provide detailed description in narrative)

Note for Codes H221, H222, and H605 - For accidents involving non-compliance by crew members with the indication of block or interlocking signals, the appropriate human factor cause relating to

APPENDIX C - Continued

failure to comply with the signal should always be used as the primary cause. Code H605, "Failure to comply with restricted speed in connection with the restrictive indication of a block or interlocking signal," should be shown as the contributing cause in those accidents arising from noncompliance with block or interlocking signal conveying a restrictive indication. Code H607 may be used as the primary cause code when the accident did not involve block or interlocking signals, but arose due to non-compliance by crew members with timetable special instructions, equipment restrictions, and/or operating rules or procedures.

General Switching Rules

- H301 Car(s) shoved out and left out of clear
- H302 Cars left foul
- H303 Derail, failure to apply or remove
- H304 Hazardous materials regulations, failure to comply
- H305 Instruction to train/yard crew improper
- H306 Shoving movement, absence of man on or at leading end of movement
- H307 Shoving movement, man on or at leading end of movement, failure to control
- H308 Skate, failure to remove or place
- H309 Failure to stretch cars before shoving
- H310 Failure to couple
- H311 Moving cars while loading ramp/hose/chute/cables/bridge plate, etc., not in proper position
- H312 Passed couplers (other than automated classification yard)
- H313 Retarder, improper manual operation
- H314 Retarder yard skate improperly applied
- H315 Portable derail, improperly applied
- H316 Manual intervention of classification yard automatic control system modes by operator
- H317 Humping or cutting off in motion equipment susceptible to damage, or to cause damage to other equipment
- H318 Kicking or dropping cars, inadequate precautions
- H399 Other general switching rules (Provide detailed description in narrative)

Main Track Authority

- H401 Failure to stop train in clear
- H402 Motor car or on-track equipment rules, failure to comply
- H403 Movement of engine(s) or car(s) without authority (railroad employee)
- H404 Train order, track warrant, track bulletin, or timetable authority, failure to comply
- H405 Train orders, track warrants, direct traffic control, track bulletins, radio, error in preparation, transmission or delivery
- H406 Train orders, track warrants, direct traffic control, track bulletins, written, error in preparation, transmission or delivery
- H499 Other main track authority causes (Provide detailed description in narrative)

Train Handling/Train Make-Up

- H501 Improper train make-up at initial terminal
- H502 Improper placement of cars in train between terminals
- H503 Buffing or slack action excessive, train handling

APPENDIX C - Continued

- H504 Buffing or slack action excessive, train make-up
- H505 Lateral drawbar force on curve excessive, train handling
- H506 Lateral drawbar force on curve excessive, train make-up
- H507 Lateral drawbar force on curve excessive, car geometry (short car/long car combination)
- H508 Improper train make-up
- H509 Improper train inspection
- H510 Automatic brake, insufficient (H001) -- see note after cause H599
- H511 Automatic brake, excessive (H002)
- H512 Automatic brake, failure to use split reduction (H003)
- H513 Automatic brake, other improper use (H004)
- H514 Failure to allow air brakes to fully release before proceeding (H005)
- H515 Failure to properly cut-out brake valves on locomotives (H006)
- H516 Failure to properly cut-in brake valves on locomotives (H007)
- H517 Dynamic brake, insufficient (H009)
- H518 Dynamic brake, excessive (H010)
- H519 Dynamic brake, too rapid adjustment (H011)
- H520 Dynamic brake, excessive axles (H012)
- H521 Dynamic brake, other improper use (H013)
- H522 Throttle (power), improper use (H014)
- H523 Throttle (power), too rapid adjustment (H015)
- H524 Excessive horsepower (H016)
- H525 Independent (engine) brake, improper use (except actuation) (H023)
- H526 Failure to actuate off independent brake (H024)
- H599 Other causes relating to train handling or makeup (Provide detailed description in narrative)

Note: The description of the causes for codes H510 through H526 were originally found in subgroup "Brakes, Use of". It has been decided that these causes are more appropriate to the "Train Handling/Train Makeup" subgroup. Consequently, it was necessary to assign new codes in order to maintain the coding convention and to simplify grouping of causes by computer. The original code has been appended to the description to aid in data conversion.

Speed

- H601 Coupling speed excessive
- H602 Switching movement, excessive speed
- H603 Train on main track inside yard limits, excessive speed
- H604 Train outside yard limits, in block signal or interlocking territory, excessive speed
- H605 Failure to comply with restricted speed in connection with the restrictive indication of a block or interlocking signal.
- H606 Train outside yard limits in nonblock territory, excessive speed
- H607 Failure to comply with restricted speed or its equivalent not in connection with a block or interlocking signal.
- H699 Speed, other (Provide detailed description in narrative)

Switches, Use of

- H701 Spring Switch not cleared before reversing

APPENDIX C - Continued

- H702 Switch improperly lined
- H703 Switch not latched or locked
- H704 Switch previously run through
- H705 Moveable point switch frog improperly lined
- H706 Switch improperly lined, radio controlled
- H707 Radio controlled switch not locked effectively
- H799 Use of switches, other (Provide detailed description in narrative)

Cab Signals

- H821 Automatic cab signal, failure to comply
- H822 Automatic cab signal cut out
- H823 Automatic train-stop device cut out
- H824 Automatic train control device cut out
- H899 Other causes relating to cab signals (provide detailed description in narrative)

Miscellaneous

- H991 Tampering with safety/protective device(s)
- H992 Operation of locomotive by uncertified/unqualified person
- H993 Human Factor - track

Example: Track is inspected and an FRA defect is found; however, the track supervisor decides to delay repairs and does not slow order that location. A derailment occurs which is attributable to the defective track condition.

Example: A railroad employee (or a contracted employee), while using a bulldozer to rerail cars, caused damage to the rail on an adjacent main track. A train passing on this adjacent main track derailed due to the damage caused by the bulldozer operated by the railroad employee (or an employee contracted by the railroad.)

- H994 Human Factor - Signal installation or maintenance error (field)

Example: A signal maintainer was servicing the signal system. It was later determined during the investigation of a rear-end collision that the signal maintainer made an installation/maintenance error resulting in an incorrect aspect being displayed in the wayside signal or cab signal.

- H99A Human Factor - Signal - Train Control - Installation or maintenance error (shop).
- H99B Human Factor - Signal - Train Control - Operator Input On-board computer incorrect data entry.
- H99C Human Factor - Signal - Train Control - Operator Input On-board computer incorrect data provided
- H99D Computer system design error (non vendor)
- H99E Computer system configuration/management error (non vendor)
- H995 Human Factor - motive power and equipment

Example: A car inspector observes an obvious thin flange wheel that normally requires the car to be removed from service. However, because the train is ready to leave, he elects to leave in service. The wheel splits the next switch point and the car derailed.

FRA Guide for Preparing Accident/Incident Reports

APPENDIX C - Continued

- H996** Oversized loads or Excess Height/Width cars, mis-routed or switched.
- H997** Motor car or other on-track equipment rules (other than main track authority) - Failure to Comply.
- H999** Other train operation/human factors (Provide detailed description in narrative)

MISCELLANEOUS CAUSES NOT OTHERWISE LISTED

Environmental Conditions

- M101** Snow, ice, mud, gravel, coal, sand, etc. on track
- M102** Extreme environmental condition - TORNADO
- M103** Extreme environmental condition - FLOOD
- M104** Extreme environmental condition - DENSE FOG
- M105** Extreme environmental condition - EXTREME WIND VELOCITY
- M199** Other extreme environmental conditions (Provide detailed description in narrative)

Loading Procedures

- M201** Load shifted
- M202** Load fell from car
- M203** Overloaded car
- M204** Improperly loaded car
- M206** Trailer or container tiedown equipment improperly applied
- M207** Overloaded container/trailer on flat car
- M208** Improperly loaded container/trailer on flat car
- M299** Miscellaneous loading procedures (Provide detailed description in narrative)

Highway-Rail Grade Crossing Accidents

- M301** Highway user impairment because of drug or alcohol usage (as determined by local authorities, e.g., police)
- M302** Highway user inattentiveness
- M303** Highway user misjudgment under normal weather and traffic conditions
- M304** Highway user cited for violation of highway-rail grade crossing traffic laws
- M305** Highway user unawareness due to environmental factors (angle of sun, etc.)
- M306** Highway user inability to stop due to extreme weather conditions (dense fog, ice or snow packed road, etc.)
- M307** Malfunction, improper operation of train activated warning devices
- M308** Highway user deliberately disregarded crossing warning devices
- M399** Other causes (Provide detailed description in narrative)

Unusual Operational Situations

- M401** Emergency brake application to avoid accident
- M402** Object or equipment on or fouling track (motor vehicle - other than highway-rail crossing)
- M403** Object or equipment on or fouling track (livestock)
- M404** Object or equipment on or fouling track - other than above (for vandalism, see code M503)
- M405** Interaction of lateral/vertical forces (includes harmonic rock off)
- M406** Fire, other than vandalism, involving on-track equipment

APPENDIX C - Continued

- M407** Automatic hump retarder failed to sufficiently slow car due to foreign material on wheels of car being humped
- M408** Yard skate slid and failed to stop cars
- M409** Objects such as lading chains or straps fouling switches
- M410** Objects such as lading chains or straps fouling wheels
- M411** Passed couplers (automated classification yard)

Other Miscellaneous

- M501** Interference (other than vandalism) with railroad operations by nonrailroad employee
- M502** Vandalism of on-track equipment, e.g., brakes released
- M503** Vandalism of track or track appliances, e.g., objects placed on track, switch thrown, etc.
- M504** Failure by nonrailroad employee, e.g., industry employee, to control speed of car using hand brake
- M505** Cause under active investigation by reporting railroad (Amended report will be forwarded when reporting railroad's active investigation has been completed.)
- M506** Track damage caused by non-railroad interference with track structure
- M507** Investigation complete, cause could not be determined (When using this code, the narrative must include the reason(s) why the cause of the accident/incident could not be determined.)
- M599** Other miscellaneous causes (Provide detailed description in narrative)

APPENDIX C - Continued

Definitions and Guidelines to support Train Accident Cause Codes:

1. “Fixed Signal” - A signal of fixed location indicating a condition affecting the movement of a train or engine. Note: The definition of a “Fixed Signal” covers such signals as switch, train order, block, interlocking, semaphore, disc, stop board, yard limit boards, direct traffic control signs, or other means for displaying indications that govern the movement of a train or engine.

Codes H219 and H220 have been designed to capture accidents/incidents that result from fixed signals other than automatic block or interlocking signals. Events of this type would result from the improper display of, or failure to comply with, switch targets; train order signals that are not a part of the automatic block or interlocking signal system; semaphore signals; discs; stop boards at railroad crossings or other locations; and/or yard limit boards. Code H219 is to be used for improper display, and Code 220 for failure to comply.