LOCOMOTIVE AND ROLLING STOCK CONFORMANCE RECOMMENDED PRACTICES

(ALIAS ONE-STRIKE POLICY)
ADOPTED JANUARY, 2003
(REVISED SEPTEMBER 2011)

SECTION 1 – GENERAL

1. This policy is meant *strictly* to ensure trouble free performance of equipment on the club's layout. When we put on an open house, we should think of it as an opportunity to showcase our operating prowess, not derailments.
2. All members should make every effort to ensure that their equipment is trouble-free BEFORE placing it on the layout.
3. If a car fails to operate properly in ANY manner, it shall be removed from service on the layout immediately and placed in an area to distinguish it as "bad order" and remain there until such time it can be inspected and repairs made.
4. To help identify the cars, a database will be used by the club for the purpose of recording repairs that have been performed to a car or locomotive. See the BCMRC Rolling Stock and Locomotive Certification Standards.
5. If multiple cars/locos have problems in the same areas of the layout, the track work should also be inspected and repair/replacement made if necessary.
6. Couplers – While certain brands of magnetic knuckle couplers have shown some promise and have in fact held up to the demanding nature of our layout, there is NO SUBSTITUTE for a properly installed and maintained metal knuckle coupler – the extra cost is worth the result. Scale head couplers, while excellent in their own right and look outstanding, generally do not stay coupled to anything but another scale head. As new metal couplers are introduced in the future, a rigorous testing on our layout will be performed before they are determined to be acceptable for use during show season.
7. The club should attempt to obtain and maintain a BASIC set of tools for maintenance of equipment. The club may also provide such items as springs and lubricants, but will not provide an entire selection of couplers, weights or wheel sets for repairs, as this should be the responsibility of the club member.
8. If you don't know how to go about doing things-ASK! We all are in this club to learn from and share ideas with each other, and we'll be glad to show anyone how it's done.
9. The NMRA Standards Gauge should be used to ensure compliance with aspects the gauge can determine (flange depth, wheel spacing on axle, etc.).

SECTION 2 – ROLLING STOCK

1. Rolling stock should meet the requirements as outlined in the BCMRC Rolling Stock and Locomotive Certification Standards.
2. The rolling stock should undergo an inspection and wheel cleaning annually to ensure trouble free performance.

SECTION 3 – LOCOMOTIVES

1. The term locomotive refers to any model that is self-propelled and generally falls into the descriptive categories of steam, diesel, or traction.
2. Locomotives should meet the following criteria:
    a. Couplers properly installed/maintained and matching the provided Kadee height gauge.
    b. Weighting – The weight of the locomotive should be noted by the member as a rough idea of what its tractive effort might be, which translates into how many cars the locomotive can pull. If information on the locomotive's drawbar pull has been published (e.g. Model Railroader, Railroad Model Craftsman) that indicates how many cars the locomotive can pull (on straight and level track), this information should also be noted by the member as a benchmark so that the member acting as yard master can make informed decisions as to what locomotive can do what, particularly if the train is to be run in the westbound direction, or if the locomotive should be double-headed with another one, etc. As a rule of thumb, the rated number of cars that the locomotive can pull should be reduced by 50% if run westbound, and by 33% if run eastbound due to prevailing grades in each direction.
    c. In lieu of the above information, the member should run the locomotive in the westbound direction with a cut of 10 to 12 properly weighted cars that are 40 to 50 scale feet in length, and add cars one at a time to the point that the locomotive just barely slips going up the prevailing grade. Subtract two cars, and you have the total number of cars that the locomotive can pull around the layout.
    d. Wheels should be free of excessive dirt.
    e. Drive train mechanisms should be free of excess lubrication, as this excess can seep out on to the wheels and/or rails, causing reduced traction and increased dirt pickup.
    f. Minimum operating radius noted, particularly for six axle diesels and large articulated steam locomotives.
    g. Knowledge of what type of DCC decoder is installed in the locomotive. The club should attempt to maintain a database of manufacturer's decoder brochures so that quick reference can be made to them in case of running troubles.
    h. DCC programming of the locomotive's decoder should preferably not be done during a show, as the person doing the programming is usually the dispatcher and is tied up with other tasks.
    i. The locomotive shall undergo an inspection and wheel cleaning on an annual basis to ensure trouble free performance.

SECTION 4 – ONE STRIKE QUALIFICATIONS

This section will describe what items and behaviors will cause a car or locomotive to be removed from the layout.

1. Derailment on any section of track when other cars/locomotives go through it without trouble.
2. Inability to be coupled to another car/locomotive when the couplers are not over an uncoupling magnet and on a straight section of track. This may be indicated by a coupler not centering properly or missing a knuckle spring.
3. Non-free rolling of car or a non-driven wheel, which is indicated by the car or locomotive's wheels being drug along.
4. Rolling stock (locomotive pilot and trailing) trucks do not swivel freely.
5. Locomotives displaying jerking or erratic operating characteristics.
6. Car causes DCC short circuits due to non insulated wheel sets or completely metal trucks.

SECTION 5 – RECOMMENDED TOOLS AND ACCESSORIES

Basic items that would be feasible for the club to obtain/remunerate members for:

- Miniature/jeweler's screwdriver set
- Miniature assorted pliers (needle nose, mini lineman's, etc.)
- Basic No. 11 Xacto type knife and spare blades
- Assorted stick on weights and weight sheets (A-Line)
- 25 watt Soldering iron, Tix Flux and Anti Flux, fine electronic solder
- Plastic compatible lubricants in oil, grease and powdered forms
- Centering springs for various types of Kadee couplers
- Knuckle springs for various types of Kadee couplers
- Kadee Grease-Em lubricant/powdered graphite
- Trip pin pliers
- Paper towels
- Goo-Gone or similar wheel cleaning fluids (rubbing alcohol, WD40, etc.)
- NMRA Standards Gauge MK IV
- Kadee Coupler Height Gauge or it's equivalent

SECTION 6 – ATTACHMENTS

The following is a list of reference documents that are made a part of this document located at the club:

- Kadee coupler selection guide
- 'Use the right wheel sets' article from April, 2002 MR
- 'Back to basics: cleaning wheels' from MR
- 'Standards for passenger cars' from 1991 Great Model Railroads
- 'The A to Z of couplers….' from July 2000 MR

- NMRA RP 20.1 and club's weighting chart
- 'Banish Derailments' from January 2001 MR
- Email from Jim Hediger, MR Senior Editor, on how to determine drawbar pull for locomotives