

OPERATIONAL INSTRUCTION OVERVIEW

Operation – Both manual and electrically powered winches develop tremendous forces; therefore, all backstops must be operated by qualified personnel only to avoid structural damage or possible personal injury. Authorized personnel is defined as an individual (or individuals) who is at least 21 years of age, has been trained for the proper operation of the unit, and is sanctioned by the facility as being responsible for the operation of the equipment.

Electrically Operated Equipment – The wall mounted key switch must be flush-mounted on the wall and located in full view of the gymnasium equipment so that the operator may stop the operation of the equipment should there be any malfunction during the raising and lowering cycles. At no time should the key switch or reversing switch on the portable electric operator be reversed quickly, as this may cause damage to gears and may cause the electrical circuitry to override the up-and-down limits. On the up cycle, the backstop operation must halt before any portion of it strikes the building structure.

Manually Operated Equipment – Limit switches or mechanical stops may not be used. Therefore, it is the responsibility of the operator to stop the hoisting operation before the backstop strikes an obstruction. As a visual aid, a piece of tape may be placed on the hoist cable to align with the top of winch when the backstop is in the up position.

Important Note – These units can be dangerous if operated carelessly by inexperienced personnel; therefore, the keys or handles of the manual winches must be in the possession of responsible, trained personnel only. Proper operation and maintenance will promote longevity to the equipment and avoid the possibility of accidents.

REQUIRED MAINTENANCE CHECK LIST

This inspection checklist is to assist you with your maintenance program. As you are making the inspection, enter an “S” for satisfactory, or an “R” for repair or replacement.

Porter recommends a maintenance inspection take place at least once a year by a Porter Certified Inspector, using the attached check list. Porter recommends the same check list be used as a guide for additional inspections by facility personnel or operators every 6 months. Any abnormal movement or sound during operation is cause for an immediate and thorough inspection. The annual inspection by a Porter Certified Inspector is required to maintain the extended limited warranty.

1. **Inspect All Winches** – The winch, either manual or electric, is the most important part to maintain on a folding-type- basketball backstop.

A. For the manual winches, periodically check the winch every three to four months, lubricating as required. Use Pyroshield No. 5182 Grease.

Check gears for excessive wear, replacing them if signs of wear are apparent. To properly check manual winches, the metal cover may be removed. If the teeth of either the bronze or steel gear show signs of becoming pointed or tapering to a point, they should be replaced. Steel or bronze shavings (a sign of improper lubrication) will usually be present if the teeth have worn this severely. Normally the teeth will appear to be blunt and show signs of slight wear only on the sides. If this is the case, lubricate the gears with the recommended open gear lubricant.

B. Electric winches should also be periodically inspected for proper operation of the limit switch assembly and key switch. Faulty electrical components could create serious hazards.

The winches should also be inspected for possible hairline cracks in the cable drum. If cracks are visible, do not use until unit is replaced or repaired. If winch is belt driven, inspect the small and large belt drive pulleys, making certain they are properly secured to each shaft, and rotate concentrically. Also, check anchorage of winch to either the support pipe or wall; and loose anchorage should be repaired immediately. If the winch is gear driven, make sure the gear is not showing excessive signs of wear. Note any excessive noise as well as checking the limits are properly set to ensure complete stop before backstop comes within a safe distance of any obstructions. Make sure cable is properly spooling to ensure the limits will properly engage. The cable should evenly wrap the cable drum until the entire cable drum is wrapped or the limits are reached before the cable wraps on top of itself.

2. **Inspect Hoisting Cable** – Check cable for kinking and fraying. The best method is to take an oily or grease-filled rag and rub along the cable. The rag may hit broken strands of cable and snag. If the snags appear approximately ten times in a ten (10) foot length of cable, the cable should be replaced. This procedure not only checks the cable, but lubricates it for longer wear. Also, make certain the cable wraps evenly on the drum. Refer to the instructions in this manual for correcting an uneven cable wrap. Ensure the cable is free of any interferences which may be present along it's route. Ensure cable connections are secure and tight.

Note – The grinding noise of the hoist cable against the strands already wrapped on the winch-hoisting drum is normal with this hoist system.

3. **Inspect All Pulleys** – It is advisable to check all pulleys, checking the sheave bearing and shaft for excessive wear, replacing if necessary. Lubricate bearing at assembly.
4. **Inspect Slide Rods or Telescoping Back Braces** – (Forward-fold, back braced models) Clean slide rods and lubricate periodically to prevent binding on raising or lowering cycle. Binding of the rear brace slide casting on the slide rod could cause damage to backstops if not properly lubricated. A dry silicon lubricant is recommended on the slide rods so as not to collect dirt and dust which cause binding of slide rod fitting. Note and surface finish defects or deformation of the brace
5. **Inspect Folding Brace Hinge** – (Folding Brace Models) Check power lock hinge is properly folding and connections are secure. Ensure rivets installed to insure brace is secure. Hinge should be all the way locked so that a force on the back of the backstop does not cause the unit to start folding. Check that braces do not have any signs of deflecting.
6. **Inspect Backstop Structure Fittings** – Visually inspect backstop clamps and support fittings for hairline cracks, loose bolts and corrosion, replacing defective parts as required. All backstop fittings should be tightened occasionally to keep backstop rigid. Vibration may cause fittings to loosen causing undue “rattling” of backstops. To stiffen backstops with cross tension type flats, drive the bottom clamps downward on pipe to put flats in tension. Check all hinge fittings, tightening and lubricating hinge bolt as required. Replace worn bolts as required, utilizing the proper grade bolt and nut type as listed in the Fittings Parts List in this manual.
7. **Inspect Backstop Structure** – Visually inspect structure pipes for any sign of abnormal deflection or structural cracks.

8. **Check Backstop Accessories** – Such as the cable/saf-strap retractor system (on forward fold models), which retracts the cable/saf-strap from the hoist position. Replace if required.
9. **Safety Straps** – Check Saf-Strap to make sure it retracts properly into the housing unit. Also inspect strap tie-off on the equipment, ensuring it is securely attached. It is recommended that a safety lock be used on any backstop which folds over a spectator bleacher. Consult factory for details if this unit was not included on the original installation. Ensure saf-strap warning label is not exposed as this indicates the strap has caught a load and replacement may be required.
10. **Goal and Backboard Hardware** – Ensure that the hardware that secures the goal and backboard to the mast is present and tight. Take a wrench to the hardware to confirm. Check the connections for the height adjuster or backboard extenders to the mast are present and tight as well.
11. **Mast** – Ensure that the backstop mast does not have any un-expected deformations or surface defects.
12. **Mast and Brace Hangers** – Check that mast hinges are rotating properly when backstop is folding. Check that mast hinge hardware is present and tight. Check that each brace connection is properly rotating and that the hardware securing these hangers are secure. Note any excessive wear
13. **Electrical System** – Check that the key switch or electrical system is working properly in both directions.
14. **Other Equipment** – Other equipment such as height adjusters, winches, shot clocks, and electrical systems may have their own maintenance check lists to perform.

BASKETBALL BACKSTOP INSPECTION REPORT

The following page should be copied and returned to Porter Athletic by a Porter Certified Inspector after each inspection.

Porter Order Number _____
Project Name _____
Name of Selling Dealer _____
Date of Scheduled Shipment _____
Date of Substantial Completion _____

(Information should be found on the first page of Installation manual)

Inspecting Company Name _____
Porter Certified Inspector Name _____
Inspection Date _____

Summary of Inspected Equipment, Include any replaced, repaired, damaged, or worn parts. _____

Please attach the checklist of each equipment inspected

BASKETBALL BACKSTOP INSPECTION CHECKLIST

Please refer to previous pages for details on inspections.
 This checklist is to assist you in your inspection program.
 As you are making the inspection, enter "S" for satisfactory, or "R" for repair and replace.

INSPECT ALL ITEMS FOR EACH BACKSTOP											
WINCH											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
HOISTING CABLE											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
PULLEYS											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
TELESCOPING/SLIDING BRACES											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
FOLDING BRACE HINGE											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
STRUCTURAL FITTINGS											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
STRUCTURE											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
BACKSTOP ACCESSORIES											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
SAFTEY STRAPS											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
GOAL AND BACKBOARD HARDWARE											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
MAST											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
MAST AND BRACE HANGERS											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
ELECTRICAL SYSTEMS											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
OTHER EQUIPMENT											
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12