HIGH QUALITY, INSULATED BAROMETRIC RELIEF DAMPER, BY M.C.

DUCTWORK, BY M.C. LOCATE AT MOST DISTANT POINT FROM DEHUMIDIFIER SUPPLY AIR.

EXTERIOR WALL

GLASS ELEVATION

DASHERBOARD UPPER SHIELING SYSTEM

DASHERBOARD

ICE SURFACE

HOT SLAB, BY G.C.

AIRFLOW

AIR DISCHARGE

TYPICAL BAROMETRIC DAMPER
SECTION A-A FROM FORM #ENDH-128
Barometric Relief Damper – Model BRL

Design Features — Traditional medium to light duty galvanized & aluminum backdraft damper with adjustable blade mounted counter weight.

**PLEASE SPECIFY HORIZONTAL OR VERTICAL FLOW**

**STANDARD CONSTRUCTION**

**FRAME**
4” Deep, 16 gauge galvanized steel

**BLADES**
.063” Aluminum, 6” to 12” wide (varies with height dimension)

**BLADE AXLES & BEARINGS**
AXLE – 1/2” Plated shaft
BEARING – 1/2” Bore ball bearing

**LINKAGE**
Mounted at the center point of the width dimension on face of blade

**COUNTER WEIGHT**
Adjustable, on .063” aluminum bracket

**MAXIMUM VELOCITY & STATIC PRESSURE**
1500 FPM @ 2’ Static pressure

**MAXIMUM TEMPERATURE**
250°F

**MAXIMUM SIZE**
Unlimited, with mullions, structural bracing supplied by others

**MAXIMUM SINGLE SECTION SIZE**
48”w x 96”h

**MINIMUM SIZE**
6”w x 14”h

**UNDERSIZED**
1/4” under ordered size unless specified Exact or Actual

**FINISH**
Mill

**OPERATOR**
None

**OPTIONAL CONSTRUCTION**

**FRAME** — Available in galvanized steel or aluminum up to 10 gauge

**BLADES** — Available in galvanized steel or aluminum up to 14 gauge

**SPECIFIED MATERIAL** — Available in Stainless, Aluminum or as requested

**BLADE & JAMB SEALS** — Neoprene blade edge and foam rubber side seals

**SLEEVE AND DUCTWORK CONNECTION** — 10 ga. to 20 ga. Galvanized steel to 30” in length; — Transitions available in; round, oval, rectangular or custom. Factory can install access door, retaining angles, or flange connections.

**SPECIAL PURPOSE CONSTRUCTION**

Fully welded assembly

Security bars (mounted in sleeve)

Horizontal mount up flow or down flow configurations

For higher velocities please consult factory

* Dampers 11” high and under will be single blade, and extend from the frame proportionately

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**DATE**

<table>
<thead>
<tr>
<th>ARCHITECT</th>
<th>ENGINEER</th>
</tr>
</thead>
<tbody>
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**PROJECT**

<table>
<thead>
<tr>
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<th>QTY</th>
<th>W</th>
<th>H</th>
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<tbody>
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<td></td>
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</tr>
</tbody>
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SAFE-AIR OF ILLINOIS INC.
Engineering and General Offices
1855 South 54th Avenue, Cicero, Illinois 60604
Phone 708-652-9100  FAX 708-652-9158

SAFE-AIR is a registered trademark
Industrial Pressure Relief Damper
Model HPR-230

Application and Design
Model HPR-230 is a heavy duty pressure relief damper with double flanged channel frame and streamlined airfoil blades. It is designed to protect HVAC systems and industrial processes by relieving air pressure. External heavy duty linkage, ball bearings, blade counterbalance and adjustable pressure setting weights are standard.

Ratings (See page 2 for specific limitations)
- Pressure Relief: 0.25 in. wg minimum
- 4.0 in. wg maximum
- Back Pressure: 6.0 - 13.5 in. wg
- Velocity: 3900 - 5150 fpm
- Temperature: Minimum: -40°F
- Maximum: 250°F
- Consult factory for temp. above 250°F.

Standard Construction (See page 3 for options)
- Frame: 8 in. x 2 in. x 12 ga. galvanized steel channel.
- Blades: Airfoil shaped, 18 ga. galvanized steel double skin construction, edge pivoted, 7 in. max. spacing.
- Blade Seals: Silicone rubber.
- Axles: Plated steel ¾ in. dia.
- Linkage: External heavy duty type with galvanized steel clevis arms and plated steel tie bars & pivot pins with nylon pivot bearings.
- Bearings: Galvanized steel ball press fit into frame.
- Pressure Set: Adjustable arms and weights.
- Finish: Mill galvanized.

Size Limitations:
- Maximum Single Section Size: 48 in. W x 96 in. H
- Maximum Double Section Size: 96 in. W x 96 in. H
- Minimum Size: Single blade 6 in. W x 6 in. H

Advise flow direction, relief pressure, & counterbalance weight location when ordering

Counterbalance & Pressure Setting Weight Dimensions
Back Pressure Limitations
The chart at the right shows conservative pressure limitations based on a maximum blade deflection of w/360.

Temperature Limitations
-40°F to +250°F
For higher temperatures consult Greenheck

Velocity Limitations
The chart at far right shows conservative velocity limitations based on damper size.

Pressure Relief/Leakage Data
This pressure drop data was conducted in accordance with AMCA Standard 500 using the configuration shown. All data has been corrected to represent standard air at a density of 0.075 lb/cu.ft.

AMCA Test Figure
Figure 5.5 Illustrates a plenum mounted damper. This configuration has high pressure drop because of entrance and exit losses due to the sudden changes of area in the system.
**Material Options**

Frame: Standard - 12 ga. galvanized steel  
Optional - 10 ga. galvanized steel  
12 & 10 ga. 304 stainless steel  

Blades: Standard - 18 ga. galvanized steel  
Optional - 18 ga. 304 stainless steel  

Axles: Standard - 3/4 in. dia. plated steel  
Optional - 3/4 in. dia. type 304 stainless steel  

Bears: Standard - Galvanized ball press fit into frame  
Optional - Externally mounted relubricable sealed ball  

**Frame Construction Options**

Flange (D Dim.): Standard - 2 in.  
Optional - 1 1/2 in. - 4 in.  

Bolt Holes: Standard - Does not include bolt holes  
Optional - Greenheck recommended standard pattern.  
3/8 in. Dia. holes (M dim.) Spaced 6 in. C-C (L dim.)  

Web (C Dim.): Standard - 8 in.  
Optional - 8 in. - 12 in.  

Optional - Customer may specify within limits shown in table below.  

<table>
<thead>
<tr>
<th>Dim.</th>
<th>Standard (Min./Max.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>(3/8 min.)</td>
<td>First/Last Space in Jamb</td>
</tr>
<tr>
<td>F</td>
<td>(1 min.)</td>
<td>No. of Holes in Jamb</td>
</tr>
<tr>
<td>L</td>
<td>6 in. (2 in. / 12 in.)</td>
<td>Hole Spacing</td>
</tr>
<tr>
<td>M</td>
<td>7/16 in. (3/8 in. / 11/16 in.)</td>
<td>Mounting Hole Diameter</td>
</tr>
<tr>
<td>U</td>
<td>(3/8 in. min.)</td>
<td>First/Last Space in Head/Sill</td>
</tr>
<tr>
<td>V</td>
<td>(1 min.)</td>
<td>No. of Holes in Head/Sill</td>
</tr>
<tr>
<td>Y</td>
<td>3/8 in. (3/4 in. / D-3/4 in.)</td>
<td>Centerline of bolt hole from inside edge of frame</td>
</tr>
</tbody>
</table>
Multiple Section Assembly

Damper sizes larger than 48 in. x 96 in. and up to 96 in. x 96 in. will be supplied in one frame with two sets of blades separated by a mullion as shown below. Counterbalance and pressure set weights supplied on right hand and left hand side. For sizes larger than 96 in. x 96 in. consult factory.

Specifications

Industrial grade pressure relief dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules. Dampers shall consist of: a 12 ga. galvanized steel channel frame with 8 in. minimum depth and 2 in. flanges; airfoil shaped, 18 ga. galvanized steel double skin construction blades; silicone blade seals; ¾ in. dia. plated steel axles turning in galvanized steel ball bearings press fit into frame; and external (out of the airstream) heavy duty linkage with counterbalance and pressure set weights. Damper manufacturer’s printed application and performance data including pressure, velocity and temperature limitations shall be submitted for approval showing damper suitable for back pressures to 13.5 in. wg, relief pressures to 4 in. wg, velocities to 5150 fpm, and temperatures to 250°F. Testing and ratings to be in accordance with AMCA Standard 500. Basis of design is Greenheck model HPR-230.
Industrial Pressure Relief Damper

Model HPR-120

Application and Design

Model HPR-120 is a heavy duty pressure relief damper with double flanged channel frame and single thickness blades. It is designed to protect HVAC systems and industrial processes by relieving air pressure. External heavy duty linkage, ball bearings, blade counterbalance and adjustable pressure setting weights are standard.

Ratings (See page 2 for specific limitations)

- **Pressure Relief**: 0.1 in. wg minimum
  2.0 in. wg maximum
- **Back Pressure**: 5.0 - 8.5 in. wg
- **Velocity**: 3900 - 5150 fpm
- **Temperature**: Minimum: -20°F
  Maximum with seals: 180°F
  Maximum without seals: 250°F
  Consult factory for temp. above 250°F.

Standard Construction (See page 3 for options)

- **Frame**: 8” x 2” x 14 ga. galvanized steel channel.
- **Blades**: 2V type - 16 ga. galvanized steel, eccentrically pivoted, 7” max. spacing.
- **Blade Seals**: Vinyl.
- **Axles**: Plated steel ½” dia.
- **Linkage**: External heavy duty type with galvanized steel clevis arms and plated steel tie bars & pivot pins with nylon pivot bearings.
- **Bearings**: Galvanized steel ball press fit into frame.
- **Pressure Set**: Adjustable arms and weights.
- **Finish**: Mill galvanized.

Size Limitations:

- Maximum Single Section Size: 48” W x 96” H
- Maximum Double Section Size: 96” W x 96” H
- Minimum Size: Single blade 6” W x 6” H

Advise flow direction, relief pressure, & counterbalance weight location when ordering

<table>
<thead>
<tr>
<th>Frame</th>
<th>Blades</th>
<th>Seals</th>
<th>Axles</th>
<th>Bearings</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 ga. galv. steel</td>
<td>16 ga. 304 SS</td>
<td>No Seals 250°F max.</td>
<td>Type 304 Stainless Steel ½” dia.</td>
<td></td>
<td>SS Linkage</td>
</tr>
<tr>
<td>14 ga. 304 SS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 ga. 304 SS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Flow Direction (i.e.)</th>
<th>Relief Pressure (in. wg)</th>
<th>W Width</th>
<th>H Height</th>
<th>Frame Depth</th>
<th>Flange Width</th>
<th>Bolt Hole Information (See pg. 3)</th>
<th>Counterbalance Weight Location (i.e.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vertical Up</td>
<td>8&quot; max. from inside duct</td>
<td>4.25&quot;</td>
<td>12.25&quot;</td>
<td>4.25&quot; max.</td>
<td>12.25&quot; max.</td>
<td></td>
<td>Right Hand, Left Hand, or Both</td>
</tr>
</tbody>
</table>

Project Location

Contractor Design Specifier
Back Pressure Limitations
The chart at the right shows conservative pressure limitations based on a maximum blade deflection of $w/360$.

Temperature Limitations
Vinyl blade seals: -20°F to +180°F
No seals: -20°F to +250°F
For higher temperatures consult Greenheck

Velocity Limitations
The chart at far right shows conservative velocity limitations based on damper size.

Pressure Relief/Leakage Data
This pressure drop data was conducted in accordance with AMCA Standard 500 using the configuration shown. All data has been corrected to represent standard air at a density of 0.075 lb/cu.ft.

AMCA Test Figure
Figure 5.5 Illustrates a plenum mounted damper. This configuration has high pressure drop because of entrance and exit losses due to the sudden changes of area in the system.
**Material Options**

Frame:  
- Standard - 14 ga. galvanized steel  
- Optional - 12 ga. galvanized steel  
- 12 & 14 ga. 304 stainless steel

Blades:  
- Standard - 16 ga. galvanized steel  
- Optional - 16 ga. 304 stainless steel

Axles:  
- Standard - 1/2" dia. plated steel  
- Optional - 1/2" dia. type 304 stainless steel

**Frame Construction Options**

Flange (D Dim.):  
- Standard - 2"  
- Optional - 1 1/2" - 4"

Bolt Holes:  
- Standard - Does not include bolt holes  
- Optional - Greenheck recommended standard pattern.  
  7/16" Dia. holes (M dimension) Spaced 6" C-C (L dimension)

Web (C Dim.):  
- Standard - 8"  
- Optional - 8" - 12"

Optional - Customer may specify within limits shown in table below.

<table>
<thead>
<tr>
<th>Dim.</th>
<th>Standard (Min./Max.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>6(2 min.)</td>
<td>First/Last Space in Jamb</td>
</tr>
<tr>
<td>F</td>
<td>(1 min.)</td>
<td>No. of Holes in Jamb</td>
</tr>
<tr>
<td>L</td>
<td>6&quot; (2&quot;/12&quot;)</td>
<td>Hole Spacing</td>
</tr>
<tr>
<td>M</td>
<td>7/16&quot; (1/4&quot;/ 11/16&quot;)</td>
<td>Mounting Hole Diameter</td>
</tr>
<tr>
<td>U</td>
<td>(3/4&quot; min.)</td>
<td>First/Last Space in Head/Sill</td>
</tr>
<tr>
<td>V</td>
<td>(1 min.)</td>
<td>No. of Holes in Head/Sill</td>
</tr>
<tr>
<td>Y</td>
<td>6(2&quot; (3/4&quot;/ D - 3/4&quot;)</td>
<td>Centerline of bolt hole from inside edge of frame</td>
</tr>
</tbody>
</table>
Multiple Section Assembly

Damper sizes larger than 48"x96" and less than 96"x96" will be supplied in one frame with two sets of blades separated by a mullion as shown below. Counterbalance and pressure set weights supplied on right hand and left hand side. For sizes larger than 96"x96" consult factory.

Specifications

Industrial grade pressure relief dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules. Dampers shall consist of: a 14 ga. galvanized steel channel frame with 8" minimum depth and 2" flanges; double V type blades fabricated from 16 ga. galvanized steel; ½" dia. plated steel axles turning in galvanized steel ball bearings press fit into frame; and external (out of the airstream) heavy duty linkage with counterbalance and pressure set weights. Damper manufacturer's printed application and performance data including pressure, velocity and temperature limitations shall be submitted for approval showing damper suitable for back pressures to 8.5 in. wg, relief pressures to 2 in. wg, velocities to 5150 fpm, and temperatures to 250°F. Testing and ratings to be in accordance with AMCA Standard 500. Basis of design is Greenheck model HPR-120.
Application and Design

Model HPR-330 is a heavy duty pressure relief damper with double flanged channel frame and streamlined airfoil blades. It is designed to protect HVAC systems and industrial processes by relieving air pressure. External spherical rod end linkage, externally mounted relubricable ball bearings, blade counterbalance and adjustable pressure setting weights are standard so as to withstand elevated relief pressures and flows.

Ratings (See page 2 for specific limitations)

Pressure Relief: 0.5 in. wg minimum
6.0 in. wg maximum

Back Pressure: 8.5 - 20 in. wg

Velocity: 5150 - 6400 fpm

Temperature: Minimum: -40°F
Maximum: 250°F
Consult factory for temp. above 250°F.

Standard Construction (See page 3 for options)

Frame: 8" x 2" x 10 ga. galvanized steel channel.
Blades: Airfoil shaped, 16 ga. galvanized steel double skin construction, edge pivoted, 7" max. spacing.
Blade Seals: Silicone rubber.
Axles: Plated steel ¾" dia.
Linkage: External heavy duty type with galvanized steel crankarms and ¾" spherical rod ends with ¾" threaded rod interconnect.
Bearings: Relubricable ball.
Pressure Set: Adjustable arms and weights.
Finish: Mill galvanized.

Size Limitations:

Maximum Single Section Size: 48" W x 96" H
Maximum Double Section Size: 96" W x 96" H
Minimum Size: Single blade 6" W x 6" H

Advises flow direction, relief pressure, & counterbalance weight location when ordering

<table>
<thead>
<tr>
<th>Frame</th>
<th>Blades</th>
<th>Seals</th>
<th>Axles</th>
<th>Bearings</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 ga. 304 SS</td>
<td>304 SS</td>
<td>None</td>
<td>Type 304 Stainless Steel ¾&quot; dia.</td>
<td></td>
<td></td>
</tr>
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</table>

Quantity
Flow Direction (i.e.) Vertical Up
Relief Pressure (in. wg)

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Flow Direction (i.e.) Vertical Up</th>
<th>Relief Pressure (in. wg)</th>
<th>Width</th>
<th>Height</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>J</th>
<th>F</th>
<th>L</th>
<th>M</th>
<th>U</th>
<th>V</th>
<th>Y</th>
</tr>
</thead>
</table>

Counterbalance Weight Location
(i.e.) Right Hand, Left Hand, or Both

Project Location
Contractor Design Specifier
Back Pressure Limitations
The chart at the right shows conservative pressure limitations based on a maximum blade deflection of $w/360$.

Temperature Limitations
-40°F to +250°F
For higher temperatures consult Greenheck

Velocity Limitations
The chart at far right shows conservative velocity limitations based on damper size.

Pressure Relief/Leakage Data
This pressure drop data was conducted in accordance with AMCA Standard 500 using the configuration shown. All data has been corrected to represent standard air at a density of 0.075 lb/cu.ft.

AMCA Test Figure
Figure 5.5 Illustrates a plenum mounted damper. This configuration has high pressure drop because of entrance and exit losses due to the sudden changes of area in the system.
Material Options

Frame: Standard - 10 ga. galvanized steel  
Optional - 10 ga. 304 stainless steel  
Axles: Standard - 3/4" dia. plated steel  
Optional - 3/4" dia. type 304 stainless steel  
Blades: Standard - 16 ga. galvanized steel  
Optional - 16 ga. 304 stainless steel  
Bearings: Standard - Externally mounted relubricable sealed ball

Frame Construction Options

Flange (D Dim.): Standard - 2"  
Optional - 1 1/2" - 4"  
Bolt Holes: Standard - Does not include bolt holes  
Optional - Greenheck recommended standard pattern.  
7/16" Dia. holes (M dimension) Spaced 6" C-C (L dimension)  
Optional - Customer may specify within limits shown in table below.

Web (C Dim.): Standard - 8"  
Optional - 8" - 12"

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<tr>
<th>Dim.</th>
<th>Standard (Min./Max.)</th>
<th>Description</th>
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<tr>
<td>F</td>
<td>(1 in.)</td>
<td>No. of Holes in Jamb</td>
</tr>
<tr>
<td>L</td>
<td>6&quot; (2&quot;/12&quot;)</td>
<td>Hole Spacing</td>
</tr>
<tr>
<td>M</td>
<td>7/16&quot; (1/4&quot;/11/16&quot;)</td>
<td>Mounting Hole Diameter</td>
</tr>
<tr>
<td>U</td>
<td>(3/4 in.)</td>
<td>First/Last Space in Head/Sill</td>
</tr>
<tr>
<td>V</td>
<td>(1 in.)</td>
<td>No. of Holes in Head/Sill</td>
</tr>
<tr>
<td>Y</td>
<td>5/8&quot; (3/4&quot;/D-3/4&quot;)</td>
<td>Centerline of bolt hole from inside edge of frame</td>
</tr>
</tbody>
</table>
Multiple Section Assembly

Damper sizes larger than 48"x96" and up to 96"x96" will be supplied in one frame with two sets of blades separated by a mullion as shown below. Counterbalance and pressure set weights supplied on right hand and left hand side. For sizes larger than 96"x96" consult factory.

Specifications

Industrial grade pressure relief dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules. Dampers shall consist of: a 10 ga. galvanized steel channel frame with 8" minimum depth and 2" flanges; airfoil shaped, 16 ga. galvanized steel double skin construction blades; silicone rubber blade seals; ¾" dia. plated steel axles turning in externally mounted relubricable sealed ball bearings; and external (out of the airstream) precision ¾" spherical rod end linkage with counterbalance and pressure set weights. Damper manufacturer's printed application and performance data including pressure, velocity and temperature limitations shall be submitted for approval showing damper suitable for back pressures to 20 in. wg, relief pressures to 6 in. wg, velocities to 6400 fpm, and temperatures to 250°F. Testing and ratings to be in accordance with AMCA Standard 500. Basis of design is Greenheck model HPR-330.
EM SERIES

EM-10, Horizontal Mount - Vertical Airflow Up
EM-30, Vertical Mount - Horizontal Airflow
EM-40, Horizontal Mount - Vertical Airflow Down

DAMPERS AND LOUVERS

Extruded BACKDRAFT DAMPER
ADJUSTABLE COUNTERBALANCE

EM Option

- APC (Adjustable Pressure Controller).
  Allows field setting of relief pressure on all EM dampers. Use one per panel.
  Maximum recommended pressure set limitations are as follows:
  (EM-30 Damper must be equipped with counterbalance)

<table>
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<tr>
<th>Area (ft²)</th>
<th>Max. Set Pressure (in. wg)</th>
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<tbody>
<tr>
<td>4</td>
<td>.75</td>
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<tr>
<td>6</td>
<td>.50</td>
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<tr>
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<td>.40</td>
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<tr>
<td>10</td>
<td>.30</td>
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<tr>
<td>20</td>
<td>.15</td>
</tr>
<tr>
<td>24</td>
<td>.125</td>
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<th>Part #</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>705238</td>
<td>Mounting Bracket</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>823936</td>
<td>Control Knob Sub-Assembly</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>705241</td>
<td>Release Rod</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>653631</td>
<td>1/2 in. Non-Knurled Crankarm</td>
<td>1</td>
</tr>
<tr>
<td>5A</td>
<td>705239</td>
<td>Connecting Bar (4.125 in. Long)</td>
<td></td>
</tr>
<tr>
<td>5B</td>
<td>705240</td>
<td>Connecting Bar (3.000 in. Long)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>457803</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>457806</td>
<td>3/16 E-Clip</td>
<td>1</td>
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<tr>
<td>8</td>
<td>453728</td>
<td>Link Separator Spring-SS</td>
<td>1</td>
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<tr>
<td>9</td>
<td>454092</td>
<td>5/32 x 1.5 Roll Pin-SS</td>
<td>2</td>
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<tr>
<td>10</td>
<td>416052</td>
<td>#10-32 x 5/8 SS Threadstud</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>415991</td>
<td>#10-32 Keps Nut-SS</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>415555</td>
<td>#10 x 1/2 Tek Screw-ZP</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>451588</td>
<td>1/4 in. E-Clip-ZP</td>
<td>1</td>
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<tr>
<td>14</td>
<td>451819</td>
<td>1/4 x 1/2 Knurl Pin-ZP</td>
<td>1</td>
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<tr>
<td>15</td>
<td>415609</td>
<td>1/4-20 x 1/2 Threadstud</td>
<td>2</td>
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<td>16</td>
<td>415455</td>
<td>1/4-20 Spinlock Nut-ZP</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>415482</td>
<td>3/16 x 1/2 Nylon Washer</td>
<td>2</td>
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<tr>
<td>18</td>
<td>415483</td>
<td>1/2 x .030 Nylon Washer</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
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<td>1/2 in. Push-On Retainer-ZP</td>
<td>1</td>
</tr>
</tbody>
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Item # 5A, 5B See Chart
Tested to AMCA Figure 5-3