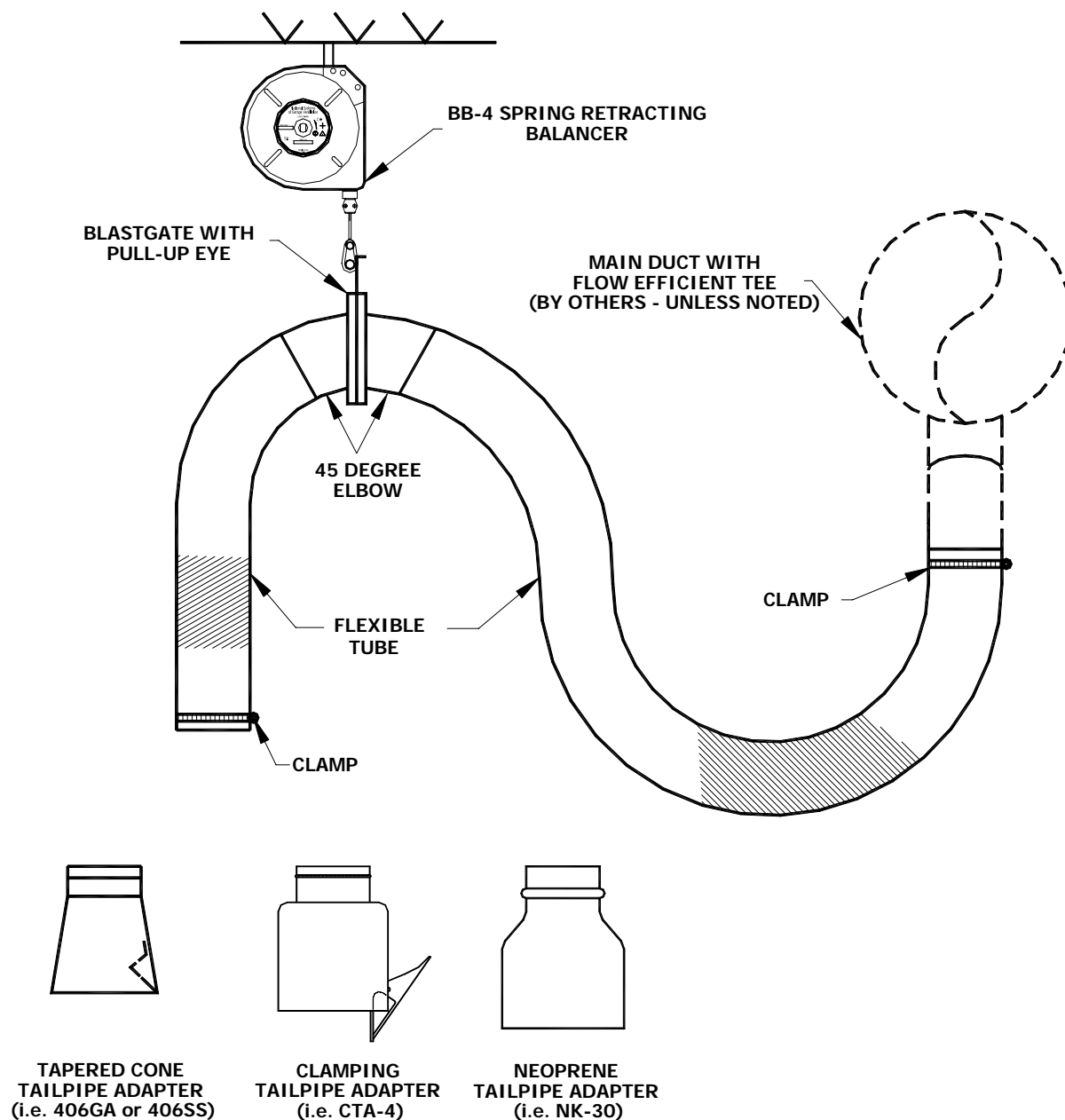


NSGV SERIES "F" INLET w/ BB-4 BALANCER

I, O & M MANUAL

NSGV Series "F" Overhead Inlet w/ BB-4 BALANCER



National System of Garage Ventilation
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NSGV OVERHEAD F-B-SYSTEM with BB-4 BALANCER

I, O & M MANUAL

INSTALLATION

1. Securely attach flexible tube to rigid overhead duct with the provided worm gear clamp.
2. Attach the Balancer to the ceiling approximately where the tailpipe adapter will be lowered.
3. **If, Blast Gate or Elbow lifting mechanism is supplied:**
 - A. Determination of where to cut the flexible tube from the tailpipe adapter end is achieved by figuring ceiling height minus 8'-6". This will leave the tailpipe adapter approximately 7'-0" above the finished floor when in the stored position.
 - B. Attach the cut piece of flexible tube to one side of the blast gate with a clamp and the long piece of tube to the other side with a clamp.
4. **If, Rubber Pull-Up Saddle lifting mechanism is supplied:**
 - A. Determination of where to place the pull-up saddle in correspondence to the tailpipe adapter end of the flexible tube is achieved figuring ceiling height minus 8'-6". This will leave the tailpipe adapter approximately 7'-0" above the finished floor when in the stored position.
 - B. Wrap the pull-up saddle around the flexible tube so that it is snug against tube. Hold in place with the corresponding hole in the saddle.
5. Attach cable to lifting mechanism, i.e. blast gate with eyebolt, pull-up saddle, or lifting elbow etc. with spring clamp.

OPERATION

1. Turn blower on.
2. Pull down the flexible tubing (per Balancer I, O, & M manual) until the desired reach is achieved, making sure that the tubing is not "stretched".
3. Place the adapter on the tailpipe.
4. The engine of the vehicle may now be started and serviced.
5. Once servicing of engine is completed, turn off the engine.
6. Remove the tailpipe adapter from the tailpipe.
7. Return flexible tube to the stored position.
8. Turn blower off.

MAINTENANCE

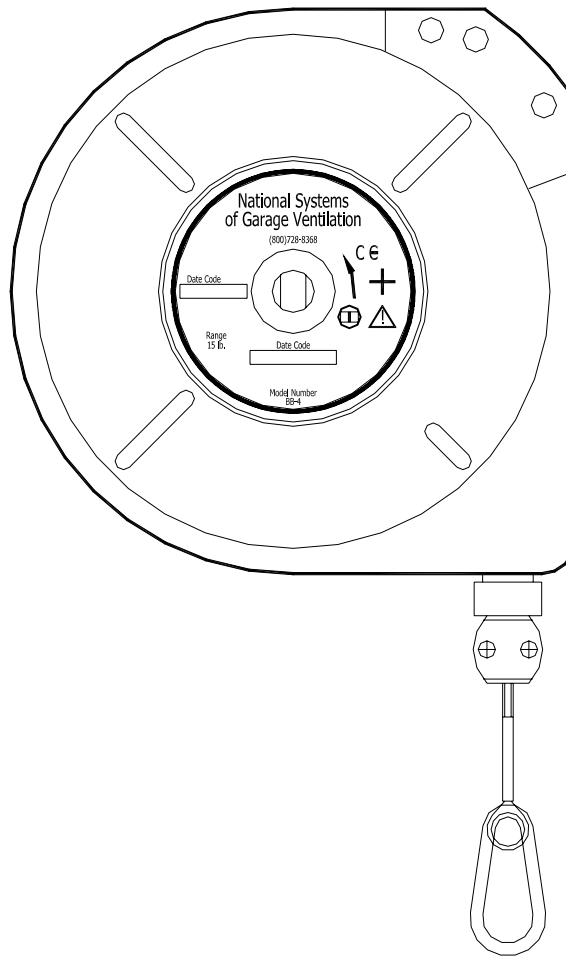
1. Periodically check to insure bolts, screws, and clamps are properly tightened.
2. Periodically check to insure proper airflow through the flexible tube. If the airflow is different or lower than needed, check the following:
 - A. Blockages in the flexible tubing.
 - B. Blast Gates are open (if used).
 - C. Obstructions at the intake/discharge of the blower.
 - D. The belts on the blower are properly tightened.
3. Periodically check the flexible tubing to insure against any tearing or holes.

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NSGV SERIES “BB-4” BALANCER

I, O & M MANUAL

NSGV Spring Return / Ratchet Lock Balancer (BB-4)



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NSGV BB-4 BALANCER

I, O, & M MANUAL

RECEIVING

Check the packing slip to make sure all items ordered have been received and no damage was incurred during shipment. If there is any damage, notify the shipping company immediately and note on the Bill Of Lading.

SAFETY INSTRUCTIONS

Please read this manual carefully and follow its instructions. Improper use or failure to follow these instructions could result in serious injury, death, or property damage. Operators should be instructed in the safe and proper use and maintenance of this product. Keep this manual for future reference.

INSTALLATION

Mounting:

Hang the balancer in the desired location by clevis provided at the top. The balancer should be suspended directly over the work area, using an eyebolt or similar device with a break strength exceeding 6 times the combined weight of the balancer and the load it is supporting. The balancer should be mounted in such a manner as to minimize cable contact with the cable guide. For proper alignment, utilize (3) three mounting holes at the top of the balancer. If the shackle is removed to make connections, be sure the nut and cotter pin are properly replaced on the shackle pin.

Secondary Support Chain:

A hole has been provided on the side of the housing to permit installation of a secondary support chain. All balancers mounted overhead must have a secondary support chain to protect personnel in case of structure or mounting component failure. Attach the other end of the secondary support chain or cable to a support component other than that which supports the balancer. Chain or cable should be as short as possible allowing balancer to drop no more than 6 to 12 inches if the primary connection is released.

OPERATION

Flexible Hose Attachment:

WARNING: Never pull the cable to the lifting mechanism to be retracted. Always raise lifting mechanism to snap clip. If the clip is accidentally released when it is extended, it will snap back.

The flexible tube shall be attached to the BB-4 balancer via blast gate with eyebolt, lifting elbow with eyebolt, or PS pull-up saddle. Simply clip the provided snap clip on the end of the cable to the eyebolt or D-Clip provided on one of the above lifting mechanisms.

Spring Tension Adjustment:

WARNING:

- **Attach full load including all attachments before adjusting tension.**
- **When releasing tension, always do so slowly, and with wrench held firmly on the shaft flats. Gloves should be worn when using tension release lever.**

Hazardous or unsafe practices could result in personal injury or death.

The tubing, including all attachments and connections must be in place before adjusting the spring tension.

- If the load exceeds spring tension, the tubing will drop, and tension must be increased.
- If tube is fully retracted but spring tension seems excessive (rapid retraction), decrease tension.

Tension should always be enough to retract the tubing and to keep the cable stop against the guide.

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NSGV BB-4 BALANCER

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Spring Tension Adjustment cont.

To Increase Tension: Engage a wrench on the flats on the mainspring shaft and turn in the "+" direction as shown in Fig. 1.

To Decrease Tension: Engage a wrench on flats on mainspring shaft. As tension release lever on opposite side of balancer is gently pushed, the shaft will unwind. Control unwinding with firmly held wrench.

After adjusting the tension, pull the cable to the fullest extension to ensure full cable travel. If the cable does not reach full extension, some tension must be released. If proper tension and extension cannot be achieved, another unit may be required. Please consult the factory.

RATCHET LOCK

The ratchet lock works in two positions in one complete rotation. Pull the cable to the desired location and let the cable retract slightly until the lock engages. To release the lock, pull the cable out about 6 inches. For constant tension, the ratchet lock may be disengaged. Turn the release knob counter-clockwise while pulling the cable in and out slightly to engage the lock release lever.

CABLE STOP ADJUSTMENT

The cable stop can be moved up along the cable to attain the most desirable working height.

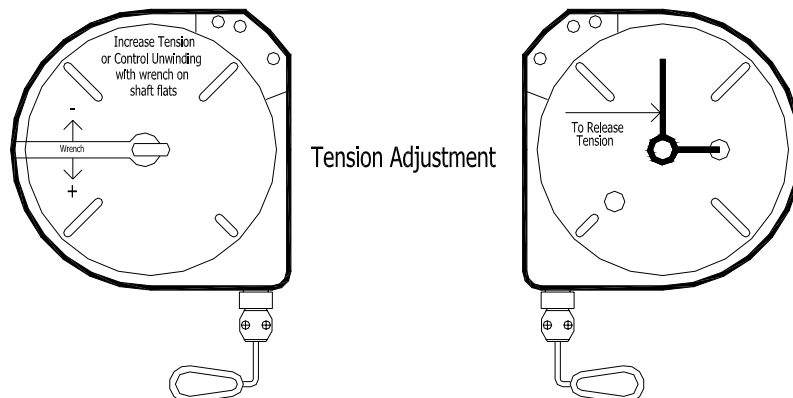
NOTE: Moving the cable stop will reduce the active travel distance.

MAINTENANCE & SERVICE

Maintenance: Due to the design, this balancer will require little maintenance other than a periodic check of the cable, safety chain, and hanger for wear. All worn parts or cable should be removed from service and/or replaced at once.

Service: National recommends returning the balancer to the factory for any service requirements due to the strong spring inside the unit.

Lubrication: All bearings, springs, etc. are permanently lubricated at the factory and should require no further lubrication.



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