

CAR-MON

SERIES CO-X EXHAUST PACKAGE

INSTALLATION OPERATION MAINTENANCE

PREPARATION

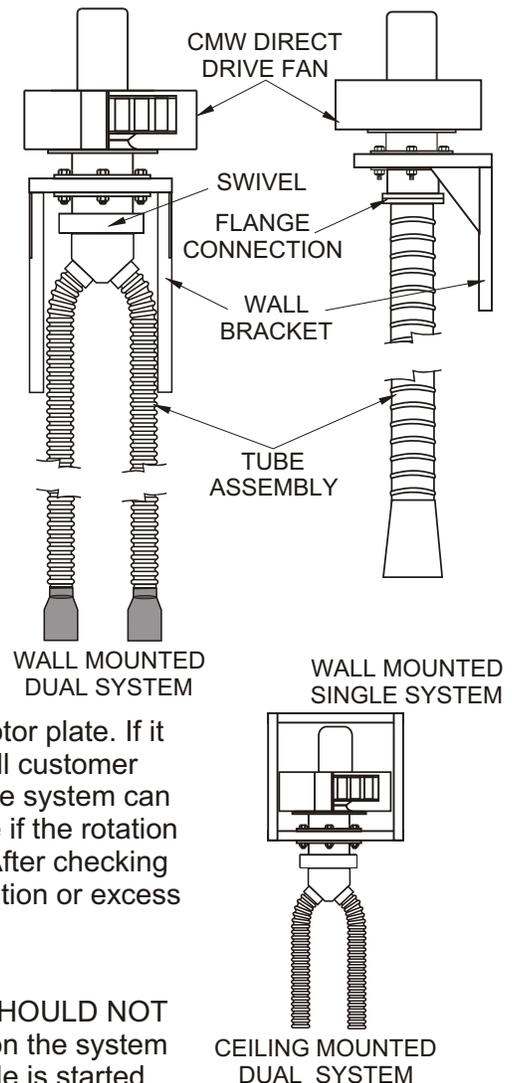
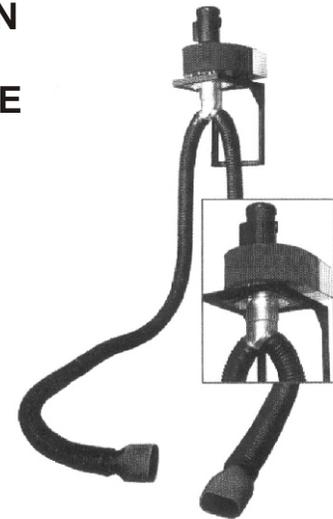
1. Check to make sure all components are complete and that there is no concealed damage. If there is concealed damage, notify carrier immediately. Car-Mon will not be responsible for equipment not inspected on receipt from carrier.
2. Review the instructions to make sure any materials needed for installation not included by Car-Mon are provided by the installer.
3. The main components for the system include a wall or ceiling platform, a CMW direct drive fan, a single or dual tubing assembly with swivel or swivel socket, gaskets, and hardware. The optional equipment may include the BA Balancer, tubing sling, pull-up set, or wall storage brackets.

INSTALLATION

1. Make sure the mounting surfaces where the CO-X platform and fan is to be mounted is level and plumb and can support the weight of the entire unit. Wall mounted platforms are installed "legs down" using the pre-drilled mounting holes. Ceiling platforms should be securely attached to the building structure using the mounting holes. Both units may also be welded to the attached surface.
2. Position CMW fan on platform using a gasket between the fan and the platform, lining up the holes and making sure the fan is in the proper discharge direction. Drop the 5/16 bolts through the bolt holes.
3. Attach the single or dual tube and swivel assembly to the bottom of the platform using a gasket between the assembly and the platform. Using the bolts from the fan above fasten with the nuts provided. Attach the fan discharge to the ductwork. For attachment of the optional balancer, see the instructions at the end of this manual.
4. Wire the fan motor. See the fan wiring diagrams on Page 2. Make sure the diagram matches the model number on the motor plate. If it does not, consult the wiring diagram on the motor plate, or call customer service at the factory. The installation is now complete and the system can be tested. When testing briefly start and stop the motor to see if the rotation of the fan is correct. If it is not, recheck the wiring of the fan. After checking rotation, run system for several minutes to check for any vibration or excess noise, and to see if there is good air flow through the tube(s).

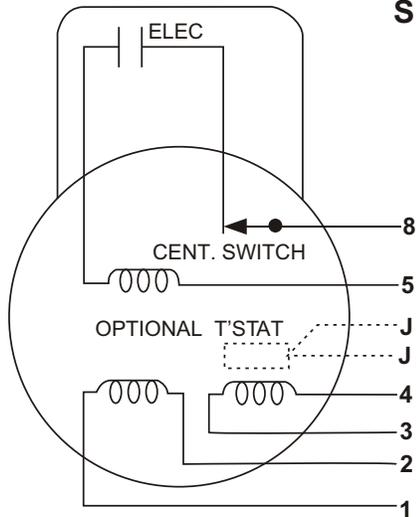
OPERATION

1. Attach the exhaust adapter the vehicle tailpipe. The vehicle **SHOULD NOT** be running while the attachment is made. Make sure the fan on the system is running and air is going through the tubing before the vehicle is started. Starting a vehicle with a exhaust adapter attached and the fan not running is unsafe and may cause damage to the tubing drop. After servicing, shut off the vehicle, leaving the tubing assembly attached and the fan running. Continue to run the fan for a short time to let the ambient air running through the tube cool it down before detaching it. Care should always be taken when removing the tubing assembly as it can remain hot for a period of time if not cooled with ambient air.



WIRING DIAGRAMS FOR CMW FANS

Make sure the motor on the fan matches one of the model numbers listed in the single or three phase wiring diagrams. In the event a special type of motor was ordered, please consult the motor plate for the wiring diagram, or phone customer service at the factory.



SINGLE PHASE, TYPE L, DUAL VOLTAGE REVERSIBLE, 6 LEAD

| VOLT | ↻ | LINE A | LINE B | JOIN |
|------|-----|--------|--------|-------|
| HIGH | STD | 1 | 4,5 | 2,3,8 |
| HIGH | OPP | 1 | 4,8 | 2,3,5 |
| LOW | STD | 1,3,8 | 2,4,5 | - |
| LOW | OPP | 1,3,5 | 2,4,8 | - |

This diagram covers most standard C-FACE, ODP, 1-phase Baldor motors (½ HP THRU 1½ HP) supplied on Car-Mon CMW flange mount fans. Check model numbers below.
 VL1303
 VL1306
 VL1309
 VL1313

WIRING DIAGRAM FOR THREE PHASE BALDOR MOTORS

This diagram covers most standard C-FACE, ODP, 3-phase Baldor motors (½ HP THRU 1½ HP) supplied on Car-Mon CMW flange mount fans. Check model numbers below.
 VM3107
 VM3111
 VM3115
 VM3120

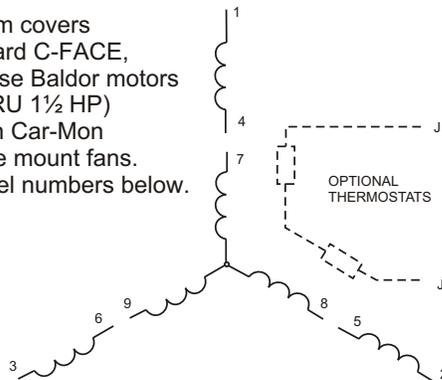
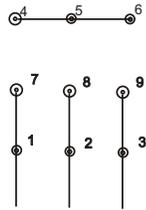


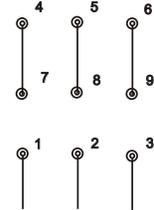
DIAGRAM SUPPLIED BY BALDOR ELECTRIC
 3PH DV, 9 LEADS

LOW VOLTAGE
 (2Y)



LINE

HIGH VOLTAGE
 (1Y)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED ONLY WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.

SYSTEM MAINTENANCE

The CO-X Exhaust Package is designed for ease of use and low maintenance. The only real maintenance needed is periodic cleaning and inspection. Keep adapters, tubing and fan surfaces free of dirt and grime. Check motor plate for any lubrication requirements.

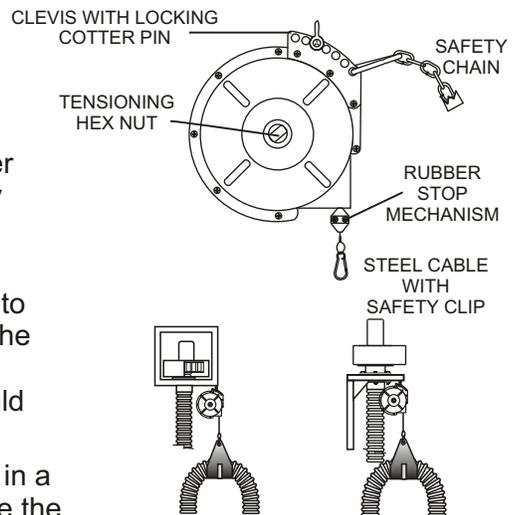
OPTIONAL ACCESSORIES FOR CO-X EXHAUST SYSTEM

NOTE: IF AN LFT RETRACTOR WAS SUPPLIED, SEE ADDITIONAL INSTRUCTIONS SUPPLIED

SERIES BA BALANCER

INSTALLATION

1. Mount the balancer to the CO-X platform by attaching the balancer clevis to the bracket on the bottom of the platform and then attaching the safety chain to the ring provided. Never use the same attachment points for both the clevis and safety chain.
2. Attach the Tubing Sling to the tubing. (When Nu-Flex crush resistant tubing is used, an outer sleeve of NE tubing is used to sit in the sling.) Raise the sling to the balancer and attach to the steel cable safety clip. **DO NOT** pull the cable down from the balancer to attach to the tube assembly-damage or injury could result!
3. If the balancer does not hang straight, try mounting the clevis in a different hole on the bracket of balancer. Make sure to replace the cotter pin on the clevis pin.



THE BA BALANCER INSTALLED ON THE CEILING AND WALL PLATFORM. FOR DUAL SYSTEMS, TWO BALANCERS MAY BE USED, ONE ON EACH SIDE OF THE PLATFORM.

HEIGHT ADJUSTMENT

FOR PROPER HEIGHT ADJUSTMENT, THE TUBING ASSEMBLY MUST BE ATTACHED. If necessary, a small extension cable may be used between the balancer and tubing assembly to adjust height of hanging assembly. This will also decrease the amount of tension on the balancer when it is pulled down, making the tubing easier to handle and increasing spring life.

IF TUBING ASSEMBLY HANGS TOO LOW:

Turn ratchet lock to "off" position and increase tension by turning shaft counterclockwise with a wrench until tube assembly is raised to desired height. Care must be taken to not overwind the spring mechanism.

IF TUBING ASSEMBLY HANGS TOO HIGH:

Turn ratchet lock to "off" position and decrease tension, by following these steps carefully.

1. Place wrench on flats of shaft to hold the shaft position.
2. While holding the shaft **FIRMLY** with the wrench, depress the spring coil on opposite side of balancer. (CAUTION! As tension is reduced, tool will fall away from the balancer.)
3. Allow the shaft to turn **SLOWLY** in clockwise direction until tubing is lowered to desired working height. (CAUTION! Do **NOT** allow the spring to unwind in an uncontrolled manner! This can result in damage to the balancer and may result in personal injury.)

RATCHET LOCK USE

1. Engage the ratchet lock by pulling cable out to desired position and letting it retract until lock engages. To disengage the lock, pull cable out slightly - it operates like a window shade.
2. For constant tension use, the ratchet lock may be turned off by turning the on/off knob located on the spring side counterclockwise. If ratchet lock is properly turned off, the "clicking" of the ratchet will no longer be present during use. To insure the knob is turned completely off, it may be necessary to first pull out some cable and then turn the knob as you allow it to rewind (firmly holding the cable so that it does not rewind in an uncontrolled manner.)

NOTE: If unit is equipped with Series LFT Retractor, refer to separate LFT O&M manual.

BA BALANCER-CONTINUED

MAINTENANCE

No regular maintenance is required, but in the interest of safety, the cable and hanger bracket should be checked periodically for wear. If wear is detected, replacement parts should be ordered and replaced immediately.

LUBRICATION

Balancer is factory lubricated-no additional lubrication is required.

SPRING, CABLE, AND RATCHET ASSEMBLY

Unit should be sent to factory for authorized repair. Call 847-695-9000 and ask for customer service and you will be given a return goods authorization number. Send unit freight prepaid for repair.

Please note that over tensioning the unit can cause the spring mechanism to break. This condition is not covered under the manufacturer's warranty.

PULL-UP SETS

Instead of using a retracting balancer to pull tubing out of the way, a more economical method is using a pull-up set with or without a winch. If this option is used, a separate instruction sheet will be included with shipment.

LIMITED WARRANTY

Car-Mon Products, Inc. shall replace or repair at its discretion any products or components sold or manufactured which prove to be defective in workmanship or materials within 1 year from date of shipment.

The foregoing is in lieu of all warranties, expressed or implied, and all other obligations or liabilities on behalf of the company, regarding products it may manufacture or sell. Except as otherwise provided herein, the purchaser accepts the product "as is".

No warranty is made regarding the suitability or compatibility of any Car-Mon product for a particular application or purpose unless specifically stated. The Customer is responsible for the final selection and utilization of Car-Mon products for their use. The Customer assumes all liability for the consequences of performance, application, use and/or misuse by employees of products purchased from Car-Mon Products, Inc.

In no event shall Car-Mon Products, Inc. be liable for consequential or special damages; for transportation, labor, or other charges for adjustment, replacement, installation, incorrect electrical connections, overloading of motor, performance at low voltage, or other alterations which may be performed in connection with such products. The warranty specified herein is waived in the event that the Distributor, Contractor, or Purchaser perform any unauthorized repairs or modifications to the product.

With regard to products or components which are furnished by Car-Mon, Inc. but not manufactured by Car-Mon, Inc., the warranty obligation of Car-Mon shall be limited to and be the same as that of its supplier.