## **XYZ** Company

#### **Written Respiratory Protection Program**

**August 2002** 



The selection of respirators in this program was based on numerous field studies where extensive testing of spray booths and a body shop environment was conducted. These studies that were used in designing this program can be acquired by contacting the New Hampshire Automobile Dealers Association - Workers Compensation Trust.

The objective of this program is to ensure that employees of XYZ Company are properly protected from potentially toxic atmospheres.

Requirements for a Respiratory protection program are found in 29 CFR Part 1910.134. OSHA's revised Respiratory Protection Standard became effective April 8, 1998. The final standard replaces the respiratory protection standards adopted by OSHA in 1971 (29 CFR 1910.134 and 29 CFR 1926.103). This program was designed to meet the changes of this revised law.

Program Administrator:

The following people are responsible for these sections of the program:

**DESCRIPTION** 

**NAME** 

Hazard Assessment Medical Evaluation Respirator Selection/Training Fit Testing Program Evaluation The following work practices require the use of a respirator:

- 1. Spray painting
- 2. Sanding
- 3. Welding, Cutting and Brazing

The following is a Matrix designed to help workers determine what respirator will be needed for specific types of spray painting work.

# **MATRIX 1 (SPRAY PAINTING)**

	Specific work	Type of spray painting gun	Respirator type
1.	Painting a car in a downdraft booth with an average airflow around car of 80fpm and no point with airflow less than 60fpm.	A HVLP spray painting gun with an atomization	A half face air-purifying respirator with activated charcoal filter or better is needed.
2.	Painting car parts that are not attached to car in a downdraft booth and paint overspray is directed at front or back of booth	A HVLP spray painting gun with an atomization	A half face air-purifying respirator with activated charcoal filter or better is needed.
3.	Painting car parts with car in booth in semi-downdraft; crossdraft or conventional	A HVLP spray painting gun with an atomization	Supplied air continuous flow or powered air purifying or better is needed.

The following is a Matrix designed to help workers determine what respirator will be needed for specific types of sanding work:

# MATRIX 2 (SANDING)

	Specific Work	Type of sander used	Mechanical ventilation	Respirator Type
1.	Sanding of body filling compounds	straight line/reciproca ting	HVLV sander	Dust mask
2.	Sanding of body filling compounds	Rotary/orbital	HVLV sander	Dust mask
3.	Sanding of body filling compounds	Rotary/orbital	Non- ventilated sander	A half face air-purifying respirator with HEPA filter.
4.	Sanding of body filling compounds	straight line/reciproca ting	Non- ventilated sander	A half face air-purifying respirator with HEPA filter.

#### WELDING, CUTTING & BRAZING

It is the policy of **XYZ Company** that while welding, cutting or brazing in the shop area, the exhaust system must be turned on. If employees decide that they don't want to use the ventilation systems discussed above then they must wear a Dust-fume-mist respirator instead. This option is only available if they are not working in close proximity to another worker who is not wearing an approved respirator.

#### MEDICAL EVALUATIONS

**XYZ Company** will provide a medical evaluation questionnaires to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace.

**XYZ Company** will use (*name and location of occupational health provider*) to evaluate the medical questionnaire.

The following information *must be provided to the medical evaluator* before a determination can be made concerning an employee's ability to use a respirator.

- 1. The type of the respirator and weight
- 2. The duration and frequency of respirator use.
- 3. The expected physical work effort.
- 4. Additional protective clothing and equipment to be worn.
- 5. Temperature and humidity extremes that may be encountered.
- 6. A copy of this written respiratory program.
- 7. A copy of the medical evaluation section of the respiratory standard.
- 8. A contact person that the medical evaluator may refer questions to.

The following information *must be obtained from the medical evaluator* before an employee can begin use of a respirator.

- 1. A written recommendation regarding the employee's ability to use the respirator. The recommendation should provide only the following information.
  - a. Any limitation on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator.
  - b. The need, if any, for follow-up medical evaluations.
  - c. A statement that the medical evaluator has provided the employee with a copy of the medical evaluator's written recommendations.

#### FIT TESTING

**XYZ Company** ensures that all employees using a tight-fitting facepiece respirator will pass a qualitative fit test with an appropriate challenging agent (e.g. irritant smoke, saccharin solution, banana oil) per OSHA protocols before any respirator is used.

**XYZ Company** ensures that all employees using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.

**XYZ Company** will perform a new fit test to any employee who has had a significant change in facial shape/structure. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

If after passing the qualitative fit test the employee subsequently notifies the employer that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator face piece and to be re-tested.

#### MAINTENANCE AND CARE OF RESPIRATORS

**XYZ Company** will provide each employee with a respirator that is clean, sanitary and in good working order. Employees will be required to clean and disinfect their respirator daily before storing. (Must be done enough so that respirator is maintained in a sanitary condition.)

#### STORAGE OF RESPIRATORS

**XYZ Company** will ensure that respirators are stored to protect them from damage, sunlight, contamination, dust, extreme temperatures, excessive moisture, and damaging chemicals and shall be stored in a manner that prevents deformation of the face piece and exhalation valve.

XYZ Company stores their respirators in Resealable Plastic Bags.

#### **INSPECTION**

All respirators must be inspected by the user. Inspections must take place before each use and during cleaning. An inspection should consist of:

- 1. a check of respirator function, tightness of connections and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube and cartridges, canisters or filters.
- 2. a check of elastomeric parts for pliability and signs of deterioration. At a minimum, the manufacturer's instructions that accompany the respirator.

#### **REPAIRS**

Any respirator, which fails an inspection, will be discarded or repaired by the company that the respirator was purchased from. The respirator will be tagged "out of service" if it is waiting to be repaired.

#### TRAINING AND INFORMATION

**XYZ Company** will ensure that each employee is provided with training prior to requiring use of a respirator at this workplace.

**XYZ Company** will ensure that each employee who is required to wear a respirator is properly re-trained on an annual basis.

Employees will demonstrate their knowledge by taking the respirator use quiz enclosed with this program.

Retraining will also be administered when:

- Changes in the workplace or the type of respirator render previous training obsolete
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill

Any employee who wears a respirator who is not required to wear one must be presented with the following information.

## ( Voluntary Use )

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substances does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

#### You should do the following:

- 1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
- 2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
- 3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors or very small solid particles of fumes or smoke.
- 4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

The following information is provided to help administrators improve their program as well as help educate the end user of a respirator on some of the dangers they will encounter while wearing a respirator in a body shop environment. This information is not intended to be company policy.

#### 1. SPRAY PAINTING

Hazardous components of paint spray include metals such as lead and chromium, polyisocyanates (HDI), and liquid organic solvents. Auto body workers may develop nervous disorders, skin and eye irritation, respiratory sensitization, asthma and reduced lung function from exposure to paint.

Effective control of worker exposure to paint over spray requires the proper selection of spray painting equipment, a properly designed and ventilated spray painting booth, and personal protective equipment. Formal training and maintenance programs will help ensure that all equipment operates properly. Three types of control are recommended:

#### SPRAY PAINTING GUNS

High Volume, Low Pressure (HVLP) spray painting guns are recommended instead of conventional gravity or siphon-feed spray painting guns because HVLP guns cut paint over spray concentrations in half. HVLP guns transfer paint more efficiently and can reduce paint usage.

#### PAINT BOOTH VENTILATION

Downdraft Ventilation spray painting booths are recommended instead of Crossdraft or Semi-Downdraft Ventilation spray-painting booths. Properly operated Downdraft booths produce lower concentrations of paint over spray compared to the other two types of booths. Downdraft booths produce a cleaner paint job that requires less buffing.

#### RESPIRATORY PROTECTION

Properly used and maintained HVLP spray painting guns and downdraft booths will greatly reduce paint over spray concentrations, but they will not completely eliminate over spray from the air workers breathe. Therefore, Personal Respiratory Protective Equipment is also required.

#### 2. SANDING

During auto body repair, sanding removes paint from surfaces and smoothes body panels repaired with body filling compounds. Airborne dusts produced during these operations may contain hazardous substances, such as lead and chromium from surface coatings and abrasives from sanding discs, that are harmful to the lungs and nervous system of workers. Dust concentrations may also exceed OSHA standards.

Effective control of worker exposure to dusts from sanding operations on auto body surfaces has been achieved by use of ventilated mechanical sanders.

#### **VENTILATED SANDERS**

Rotary/orbital and straight line/reciprocating sanders, equipped with High Velocity, Low Volume (HVLV) local exhaust ventilation as part of the tool's design, are recommended because they have been shown to be effective in reducing total dust concentrations during the sanding of body filling compounds. HVLV ventilated sanders have cut total dust concentrations to one-tenth the levels produced using unventilated sanders.

Increased cost of sanders equipped with HVLV ventilation is minor compared with non-ventilated sanders. The amount of air used in the ventilated systems is also relatively low. Making them convenient to use, for example by installing retractable, flexible hosing attached to a central vacuum system can enhance use of ventilated sanders. Although initial costs for this system including an air mover, air cleaners, and ductwork can be substantial, the system will help eliminate expensive repaints, shorten cleanup time, and extend sandpaper life. Workers prefer using these HVLV sanders and also reported their use results in a cleaner shop.

#### 3. WELDING, CUTTING AND BRAZING

Welding, cutting, and brazing are hazardous activities that pose a unique combination of both safety and health risks. The risk from fatal injuries alone is more than four deaths per thousand workers over a working lifetime.

The best practice here is to assure that there is sufficient ventilation while welding, cutting or brazing. A respirator is required when ventilation is inadequate.

# **Respirator Use Quiz**

1. What jobs do I do that make it necessary for me to wear a respirator?
2. Those jobs listed above are dangerous because?
3. How can the following compromise the effect of your respirator?
Improper fit
4. What are the limitations and capabilities of your respirator?
5. What are the company's procedures for maintenance and storage of your respirator?
6. How do you recognize medical signs and symptoms that may limit or prevent the effective use your respirator?

### PROGRAM EVALUATION

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# QUALITATIVE FIT TEST RECORD

Employee name				
Has the employee rece	eived respirato	or training?Y	TES orNO	
Type of respirator fit t			_ smoke IsoAi	
Respirator Tested:				
Size: Small	Stan	dardLarge		
TEST RESULTS:				
satisfactory seal w missing dentures,	rith individual etc. that could lividuals with	s having beards, larged interfere with the ab	ight-fitting face pieces e side burns or other co ility of the respirator to I not be tested. Did an	onditions such as o attain an
YES - Do	not continue	test - Automatic failu	re.	
NO - Con	tinue with test	t.		
2. Sensitivity Test		Passed	Failed	
3. Fit Test	Small	Standard	Large	
Passed				
Failed				
Respirator assigned: _				
Spectacle kit required	?			
Test Administrator's s	signature			
Date of Test				
Employee's Signature	:			

## MATRIX THREE

Employee Name	Completed medical evaluation	Completed fit testing	Has been trained to comply with all applicable sections of this program.
1.			
2.			
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25.			

## 1910.134: OSHA Respirator Medical Evaluation Questionnaire (Mandatory)

To the employer:	Answers to questions in Section 1, and to question 9 in Section 2 of Part A,	do not
require a medical	examination.	

To the employee:

Can you read (circle one): Yes No

place that look at o	aployer must allow you to answer this questionnaire during normal working hours, or at a time and at is convenient to you. To maintain your confidentiality, your employer or supervisor must not or review your answers, and your employer must tell you how to deliver or send this questionnaire ealth care professional who will review it.
	<b>Section 1.</b> ( <b>Mandatory</b> ) The following information must be provided by every employee who selected to use any type of respirator (please print).
1.	Today's date:
2.	Your name:
3.	Your age (to nearest year):
4.	Sex (circle one): Male Female
5.	Your height: ft in.
6.	Your weight: lbs.
7.	Your job title:
8.	A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code):
9.	The best time to phone you at this number:
10.	Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes No
11.	Check the type of respirator you will use (you can check more than one category):  N, R. or P disposable respirator (filter-mask, non-cartridge type only).  Other type (for example, half-or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).
12.	Have you worn a respirator (circle one):  Yes No
	If "yes," what type(s):
	Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who selected to use any type of respirator (please circle "yes" or "no").
1.	Do you currently smoke tobacco, or have you smoked tobacco in the last month:  Yes No

2.		Have you ever had any of the following conditions?		
		a. Seizures (fits):	Yes	No
		b. Diabetes (sugar disease)	Yes	No
		c. Allergic reactions that interfere with your breathing	Yes	No
		d. Claustrophobia (fear of closed-in places)	Yes	No
		e. Trouble smelling odors (except when you had a cold	Yes	No
3.		Have you ever had any of the following pulmonary or lung problems?		
		a. Asbestosis:	Yes	No
		b. Asthma:	Yes	No
		c. Chronic bronchitis:	Yes	No
		d. Emphysema:	Yes	No
		e. Pneumonia:	Yes	No
		f. Tuberculosis:	Yes	No
		g. Silicosis:	Yes	No
		h. Pneumothorax (collapsed lung):	Yes	No
		i. Lung cancer:	Yes	No
		j. Broken ribs:	Yes	No
		k. Any chest injuries or surgeries:	Yes	No
		1. Any other lung problem that you've been told about:	Yes	No
4.	Do	you currently have any of the following symptoms of pulmonary or lung illness	?	
		a. Shortness of breath:	Yes	No
		b. Shortness of breath when walking fast on level		
		ground or walking up a slight hill or incline:	Yes	No
		c. Shortness of breath when walking with other		
		people at an ordinary pace on level ground:	Yes	No
		d. Have to stop for breath when walking at your		
		own pace on level ground:	Yes	No
		e. Shortness of breath when washing or dressing		
		yourself:	Yes	No
		f. Shortness of breath that interferes with your job:	Yes	No
		g. Coughing that produces phlegm (thick sputum):	Yes	No
		h. Coughing that wakes you up early in the morning:	Yes	No
		i. Coughing that occurs mostly when you are		
		lying down:	Yes	No
		j. Coughing up blood in the last month:	Yes	No
		k. Wheezing:	Yes	No
		1. Wheezing that interferes with your job:	Yes	No
		m. Chest pain when you breathe deeply:	Yes	No
		n. Any other symptoms that you think may be		
		related to lung problems:	Yes	No
	5.	Have you ever had any of the following cardiovascular or heart problems?		
		a. Heart attack:	Yes	No
		b. Stroke:	Yes	No
		c. Angina:	Yes	No
		d. Heart failure:	Yes	No
		e. Swelling in your legs or feet (not caused by walking	Yes	No
		f. Heart arrhythmia (heart beating irregularly):	Yes	No
		g. High blood pressure:	Yes	No
		h. Any other heart problem that you've been told about:	Yes	No

6.	Have you ever had any of the following cardiovascular or heart symptoms?		
	a. Frequent pain or tightness in your chest	Yes	No
	b. Pain or tightness in your chest during physical activity	Yes	No
	c. Pain or tightness in your chest that interferes with your job	Yes	No
	d. In the past two years, have you noticed your heart skipping or missing a b	eat.	
	e. Heartburn or indigestion that is not related to eating	No	
	f. Any other symptoms that you think may be related to heart or circulation		
7.	Do you currently take medication for any of the following problems?		
, ·	a. Breathing or lung problems:	Yes	No
	b. Heart trouble:	Yes	No
	c. Blood pressure:	Yes	No
	d. Seizures (fits):	Yes	No
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8.	Has your wearing a respirator caused any of the following problems? (if you respirator, check the following space and go to question 9.)	ve never	usea a
	a. Eye irritation	Yes	No
	b. Skin allergies or rashes:	Yes	No
	c. Anxiety that occurs only when you use the respirator	Yes	No
	d. Unusual weakness or fatigue:	Yes	No
	e. Any other problems that interfere with your use of a respirator	103	110
	Would you like to talk to the health care professional who will review this question your answers to this questionnaire? Yes No  Questions 10 to 15 below must be answered by every employee who has been	selected t	o use
V	either a full-facepiece respirator or a self-contained breathing apparatus (SC employees who have been selected to use other types of respirators, answering coluntary.		
10.	Have you ever lost vision in either eye (temporarily or permanently):		
11.	Do you currently have any of the following vision problems?		
	a. Wear contact lenses:	Yes	No
	b. Wear glasses:	Yes	No
	c. Color blind:	Yes	No
	d. Any other eye or vision problems:	Yes	No
12.	Have you ever had an injury to your ears, including a broken ear drum:		
13.	Do you currently have any of the following hearing problems?		
13.		Vac	No
	a. Difficulty hearing:	Yes	
	b. Ear a hearing aid:	Yes	No
	c. Any other hearing or ear problem:	Yes	No
14.	Have you ever had a back injury: Yes	No	
15.	Do you currently have any of the following muscularskeletal problems?		
	a. Weakness in any of your arms, hands, legs or feet:	Yes	No
	b. Back Pain:	Yes	No
	c. Difficulty fully moving your arms and legs:	Yes	No
		Vac	Νo
	e. Difficulty fully moving your head up or down:	Yes	No No
	f. Difficulty fully moving your head side to side	Yes	No No
	g. Difficulty bending at your knees:	Yes	No
	h. Difficulty squatting to the ground:	Yes	No

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	If "yes," describe these exposures:		
	j. Any other hazardous exposures:	168	110
	i. Dusty environments:	Yes Yes	No No
	h. Tin:	Yes Yes	No No
	g. Iron:	Yes	No No
	f. Coal (for example, mining):	Yes	No
	e. Aluminum:	Yes	No
	d. Beryllium:	Yes	No
	c. Tungsten/cobalt (e.g., grinding or welding this material):	Yes	No
	a. Asbestos: b. Silica (e.g., in sandblasting):	Yes	No No
3.	Have you ever worked with any of the materials, or under any of the condition	ns listed be	
n yes,	name the chemicals if you know them.		
If "ves '	name the chemicals if you know them:		
2.	At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (i.e., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals:	Yes	No
2	under these conditions:	Yes	No
1.	In your present job, are you working at high altitudes (over 5,000 feet) or in a than normal amounts of oxygen: Yes No If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working	place that	has lower
	Any of the following questions, and other questions not listed, may be added to scretion of the health care professional who will review the questionnaire.	the ques	stionnaire
	interferes with using a respirator:	Yes	No
	j. Any other muscle or skeletal problem that	Yes	No
	i. Difficulty climbing a flight of stairs or a ladder	3.7	N

5.	List your previous occupations:		
6.	List your current and previous hobbies:		
7.	Have you been in the military services?	Yes	No
	If "yes," were you exposed to biological or chemical agents		
8.	(either in training or combat): Have you ever worked on a HAZMAT team?	Yes Yes	No No
9.	Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications):	Yes	No
	If "yes," name the medications if you know them:		
10.	Will you be using any of the following items with your respirator(s)?		
	a. HEPA Filters:	Yes	No
	b. Canisters (for example, gas masks): c. Cartridges:	Yes Yes	No No
11.	How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:		
	a. Escape only (no rescue):	Yes	No
	b. Emergency rescue only:	Yes	No
	c. Less than 5 hours per week:	Yes	No
	d. Less than 2 hours per day:	Yes	No
	e. 2 to 4 hours per day:	Yes	No
	f. Over 4 hours per day:	Yes	No
12.	During the period you are using the respirator(s), is your work effort:		
	a. Light (less than 200 kcal per hour):	Yes	No
	If "yes," how long does this period last during the average shift: hours minutes. Examples of a light wor effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1 – 3 lbs.) or controlling machines.	'k	
	b. Moderate (200 to 350 kcal per hour):	Yes	No
	If "yes," how long does this period last during the average shift: hours;minutes. Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.		

	c. Heavy (above 350 kcal per hour):	Yes	No
	If "yes," how long does this period last during the average shift:	dock; sho	veling;
13.	Will you be wearing protective clothing and/or equipment (other than the respusing your respirator:	irator) wh	en you're
If "yes,	" describe this protective clothing and or equipment:		
14.	Will you be working under hot conditions (temperature exceeding 77 degrees F):	Yes	No
15.	Will you be working under humid conditions:	Yes	No
16.	Describe the work you' be doing while you're using your respirator(s):		
17.	Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases):		
18.	Provide the following information, if you know it, for each toxic substance That you'll be exposed to when you're using your respirator(s):		
	Name of the first toxic substance:		
	Estimated maximum exposure level per shift:		
	Duration of exposure per shift:		
	Name of the second toxic substance:		

Estimated maximum exposure level per shift:	
Duration of exposure per shift:	
Name of the third toxic substance:	
Estimated maximum exposure level per shift:	
Duration of exposure per shift:	
List the name(s) of any other toxic substance(s) that you'll be exposed to while using your re-	espirator:

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security, etc.):