

When you are having a medical emergency due to an Oil or Hydraulic Fume Event Exposure this is an additional resource for you to use. Your ASHS Team is always available to guide you thru the process. For an Emergency **now** please reach out to ASHS@spiritafa.com. This email goes to the entire ASHS Team and whomever is available can assist. *Please know that we all fly the line.*

This document will help explain what happened to you in a fume event to Medical Personal treating you.

REMEMBER DOCTORS TREAT SYMPTOMS. They will order testing based on your symptoms at the time of arrival. It is also very important to let them know if you were on oxygen.

Note: MedAire is an assessment / advisement NOT medical treatment. Its like phoning a friend. They will advise if you need treatment but under OSHA you can NOT be denied medical treatment for any **On the Job Injury**. They will also advise of hospital or clinics close to you. Concentra's and other clinics may not provide the tests below and if you are severely symptomatic, you should request EMS. (You will need to contact Medaire after treatment)

Remember to contact the SOD for workers compensation paperwork and NEVER use your personal insurance for work related injuries/illnesses. You should report every incident, however you can deny medical treatment, and continue your trip.

Fumes onboard the Aircraft exposure:

This crewmember has been referred to your clinic for testing and treatment after breathing oil or hydraulic fluid fumes on the aircraft while working. The ventilation air supplied to the aircraft cabin and flight deck can be contaminated with oil and hydraulic fluid after it has been heated to high temperatures in the operating engine.

Spirit Airlines uses Turbonycoil (TN) 600 oil (Nyco) and Skydrol 5 hydraulic fluid (Eastman). Both types of fumes contain complex mixtures of organophosphates, VOCs, and ultrafine particles. Oil fumes can also contain carbon monoxide if the oil was heated to high engine temperatures ($\geq 600^{\circ}\text{F}$). TN600 oil contains $\leq 2.5\%$ phenol isopropylated phosphate (3:1) (PIP 3:1; CAS no. 68937-41-7). Skydrol 5 hydraulic fluid contains a mixture of organophosphates ($> 90\%$) and defined additives. For both products, refer to SDS online.

It would assist us if you performed the following tests in your exam today.

1. Carboxyhemoglobin levels EO-Hg (if symptomatic)
2. Serum Cholinesterase PChe
3. Serum C-reactive protein (if available)
4. Complete neurologic exam noting; Gait disturbances (walking heel toe gait) Eyes closed/heel toe/30 second Romberg. Strength and reflexes. Weakness or focal neurologic effects
5. Note any other reported observations by crew members such as Metallic taste, Burning eyes/throat, Headache. Tingling of facial area or limbs. Difficulty breathing, Pain/cramps, change in sensation, Slowed thinking, Nausea/vomiting, Diarrhea. Excessive or decreased urge or amount of urination.
6. Resting and ambulatory Sp.O2 on room air.
7. PA and lateral CXR as indicated.
8. If observed, any autonomic instabilities in blood pressure bradycardia, tachycardia, dysrhythmias, even if transient, or resolved without intervention please record and notify the crew member.

A Spanish version is below. Since we fly to so many International Spanish speaking countries, this will help if you are sent to a medical facility.

In Spanish:

Este miembro de la tripulación ha sido referido a su clínica para tratamiento y hacerse pruebas luego de respirar vapores de fluido hidráulico o aceite de motor dentro de la aeronave mientras el tripulante trabajaba. El sistema de ventilación de la aeronave puede ser contaminada con estos vapores a consecuencia de altas temperaturas del motor.

Spirit Airlines utiliza aceite Turbonycoil (TN) 600 (Nyco) y fluido hidráulico Skydrol 5 (Eastman). Ambos tipos de vapores contienen una mezcla compleja de organofosforados, partículas ultrafinas, y compuestos orgánicos volátiles. Los vapores de aceite también pueden contener monóxido de carbono si el motor se calentó a altas temperaturas (≥ 600 °F). El aceite TN600 contiene $\leq 2,5$ % de fosfato isopropilado de fenol (3:1) (PIP 3:1; n.º CAS 68937-41-7). El fluido hidráulico Skydrol 5 contiene una mezcla de organofosforados (> 90 %) y aditivos definidos. Para ambos productos, consulte la base de datos SDS en línea.

1. Niveles de carboxihemoglobina CO-Hg
2. Colinesterasa sérica PChe
3. Proteína C reactiva sérica (si está disponible)
4. Examen neurológico completo que indique: Alteraciones de la marcha (caminar con los talones y los dedos de los pies). Ojos cerrados/ talón punta/30 segundos Romberg. Fuerza y reflejos. Debilidad o efectos neurológicos focales.
5. Registre cualquier otra observación informada por los miembros de la tripulación como sabor metálico. Ardor en ojos/garganta. Dolor de cabeza. Hormigueo en el área facial o en las extremidades. Dificultad al respirar. Dolor/calambres. Cambio en la sensación. Pensamiento lento. Náuseas/vómitos. Diarrea. Urgencia excesiva o disminuida o cantidad de orina.
6. Sp-O2 en reposo y ambulatorio con aire ambiente.
7. Radiografía torácica PA y lateral como se indica.
8. Si se observa, cualquier inestabilidad autonómica en la presión arterial, bradicardia, taquicardia, arritmias, aunque sean transitorias, o resueltas sin intervención, registre y notifique al miembro de la tripulación.

