

PROGRAMA DE MANTENIMIENTO PREVENTIVO

Maintenance Preventive Program



| | | | | | | | | | |
|-----------------------------------|--|------------|--|---|------|----------|------------|--|--|
| | | | | N de ISERV | 0011 | Revision | 4 | | |
| Fecha de emision / Emission date: | | 13/07/2009 | | Fecha de actualizacion / Updating date: | | | 03/07/2012 | | |

COMPRESORES SCA 50-3

| Tareas / Works | Materiales / Materials | Codigo / Code | Cant / Quant. | 3000 hs | 6000 hs | 9000 hs | 12000 hs | 15000 hs | 18000 hs | 21000 hs | 24000 hs | Observaciones / Observations |
|--|--|---------------|---------------|---------|---------|---------|----------|----------|----------|----------|----------|--|
| Limpieza completa del equipo/ Equipment complete cleaning | Desengrasante y trapos / Degreaser and rags | | | | X | | X | | X | | X | O Cada 2 años de operación / Or two operation years |
| Lavado de aereofriadores/ Aircooler cleaning | | | | | X | | X | | X | | X | O Cada 2 años de operación / Or two operation years |
| Limpieza de carter / Crankcase cleaning | Desengrasante y trapos/ Degreaser and rags | | | X | X | X | X | X | X | X | X | O cada 6 meses de operación / Or six operation mounths |
| Cambio de aceite / oil change | Aceite multigrado 20 W 50 / 20 W 50 Multigrade oil | 20679-1 | 5 | X | X | X | X | X | X | X | X | O cada 6 meses de operación / Or six operation mounths |
| Cambio de filtro de aceite / Oil filter change | Filtro FRAM PH 20 / Fram PH 20 Filter | 20118 | 1 | X | X | X | X | X | X | X | X | O cada 6 meses de operación / Or six operation mounths |
| Control de correcta lubricacion de aros /Equipment correct lubrication checking | | | | X | X | X | X | X | X | X | X | O cada 6 meses de operación / Or six operation mounths |
| Limpieza de visores de lubricacion / Oil sight glasses cleaning | Glicerina liquida / Liquid glycerin | | 1 | X | X | X | X | X | X | X | X | O cada 6 meses de operación / Or six operation mounths |
| Prueba de estanqueidad - Fugas de gas / Watertightness test -Gas leakage | Agua Jabonosa / Soapy water | | 1 | X | X | X | X | X | X | X | X | Luego de la reinstalación de componente/s sometido/s a presión / After re-assembly components working under pressure |
| Prueba de los sistemas de drenajes / Drain systems test | | | | X | X | X | X | X | X | X | X | |
| Prueba de los sistemas de detencion del equipo / Equipment stop systems test | | | | X | X | X | X | X | X | X | X | |
| Calibracion de sensibilidad de sensor de vibracion / Vibration sensor sensitivity calibration | | | | | X | | X | | X | | X | |
| Control de calibracion de sensores de presion / Pressure sensor calibration control | | | | | | X | | | X | | | |
| Calibracion de sensor de fuga de gas en caso de que corresponda / Gas leakage sensor calibration if it corresponds | | | | | | X | | | X | | | |
| Limpieza y revision general de tablero de instrumentos / Instrument panel cleaning general inspection | Desengrasante y trapos / Degreaser and rags | | | X | X | X | X | X | X | X | X | Revisar contactor, conexiones, ajustar y/o reajustar uniones / Check contactors and connections |
| Limpieza de filtro de entrada de gas / Gas Inlet filter cleaning | Alcohol | | 1 | X | | X | | X | | X | | |
| Cambio de filtro "Y" entrada de gas/ Gas inlet"Y" filter change | FILTRO "Y" / "Y" FILTER | 24560 | 1 | | X | | X | | X | | X | |

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| Cambio de O Rings y juntas de valvulas / O rings and valves joints change | Juego de O Rings /O-ring set | 100182-4 | 1 | x | x | x | x | x | x | x | x | |
| | Juego de juntas de cobre / O-ring and valves copper joints set | 100182-11 | 1 | x | x | x | x | x | x | x | x | |
| Recambio de valvula antirretorno de ultima etapa / Last stage non-return valve rechange | Valvula de escape de 3 etapa / Outlet valve 3rd stage | 100078 | 1 | x | x | x | x | x | x | x | x | |
| Cambio de aros de todas las etapas de compresion /All compression stages rings change | Aros de 1 etapa / 1st Stage rings | 100425 | 2 | | x | | x | | x | | x | |
| | Aros de 2 etapa / 2nd stage rings | 100427 | 4 | | x | | x | | x | | x | |
| | Aros de 3 etapa / 3rd Stage rings | 100428 | 5 | | x | | x | | x | | x | |
| Cambio de bujes guias de todas las etapas de compresion /All compression stages guide bushings change | Buje guia de 1 et / 1st stage guide bushing | 100424 | 1 | | x | | x | | x | | x | |
| | Buje guia de 2 et/ 2nd stage guide bushing | 100426 | 1 | | x | | x | | x | | x | |
| Control dimensional de cilindros y pistones /Cylinders and pistons dimensional control | | | | | | | x | | | | x | |
| Cambio de vastago / piston de 1 etapa/ 1st stage piston rod / piston change | Vastago / piston de 1 etapa/ 1st stage piston rod / piston | 85815-1 | 1 | | x | | x | | x | | x | |
| Cambio de vastago / piston de 2 & 3 etapa/ 2nd & 3rd stage piston rod / piston change | Vastago / piston de 2 & 3 etapa/ 2nd & 3rd stage piston rod / piston | 85816-1 | 1 | | x | | x | | x | | x | |
| Cambio de arandelas de seguridad de apriete de vastagos / Change of safety washer of rod | Arandelas de presion para tuercas de vastagos / Washer for rod nut | 92554 | 2 | | x | | x | | x | | x | |
| Cambio de sellos de empaquetaduras / Compressor packingseals change | Aros rascaceite / Scraper rings | 91105-J | 2 | | x | | x | | x | | x | * Empaquetaduras: Verificar perdidas con: 1- Caudalimetro: revisar valores según EI-0203. 2- Revisando el nivel de aceite con la maquina en funcionamiento. Si verifica perdidas. ** A) Revisar si el vastago esta rayado / gastado a- Si esta rayado / gastado >>> cambiar vastago y empaquetadura. b- Si no esta rayado / gastado >>> cambiar solo empaquetadura.Packing seals: Check leakages: 1 - Flow: check values according to EI-0203. 2 - Checking the oil level with the machine in operation. If you check losses. ** A) Check if the rod is scratched / worn |
| | Sellos radiales/tangenciales para empaquetadura / Packing radial/tangencial seals | 85480 | 12 | | x | | x | | x | | x | |
| | Sellos tangenciales/tangenciales para empaquetadura / Packing tangencial/tangencial seals | 85480-1 | 2 | | x | | x | | x | | x | |
| | Juego de O Rings de empaquetaduras / Packing ring set | 100182-2 | 2 | | x | | x | | x | | x | |
| | Aros rompe presion / Down pressure ring | 91110 | 2 | | x | | x | | x | | x | |

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| | Conjunto porta paquete / Packing seal assembly | 100084 | 2 | | x | | x | | x | | x | a-If it's scratched / worn>>> change rod and packing. b-If it is not scratched / worn>>> change just packing. " |
| Desarme completo de manovelismo / Compressor unit complete disassembly | | | | | | | | | x | | | |
| Cambio de rodamientos de cigüeñal /Compressor crankshaft ball bearing change | Rodamiento de cigüeñal lado acople / Crankshaft ball bearings set coupling side | 120248-1 | 1 | | | | | | x | | | |
| | Rodamiento de cigüeñal / Crankshaft ball bearings set | 120247 | 2 | | | | | | x | | | |
| Cambio de reten / Compressor oil seal change | Reten de ciguenal SAV 5200 / SAV 5200 oil seal | 120261 | 1 | | | | | | x | | | O Cada 2 años de operación / Or two operation years |
| Cambio de metales de biela / White metal bearing change | Juego de metales de biela / White metal bearing change | 100165 | 4 | | | | x | | | | x | |
| Control dimensional de cruzetas / Cross Head Dimentional control | | | | | | | | x | | | | |
| Cambio de crucetas / Cross head | Crucetas / Cross Head | 100023 | 2 | | | | | | | | | |
| Control dimensional de pistas de cruzetas /Cross Head dimentional control | | | | | | | | x | | | | |
| Cambio de pernos de bielas / Connecting rod bolt change | Pernos de biela / Connecting rod bolt | 100024 | 2 | | | | | x | | | | |
| Cambio kit perno de bielas/Connecting rod pin kit | Seeger A36 / Seeger ring A36 | 120263 | 4 | | | | | x | | | | |
| | Seeger I23 / Seeger ring I23 | 120262 | 4 | | | | | x | | | | |
| | Tapón perno de biela / rod pin plug | 100025 | 4 | | | | | x | | | | |
| | | | | | | | | | | | | |
| Cambio de valvulas antirretorno de lubricacion /Non return valve for oil change | Valvula antirretorno de lubricacion / Non return valve for oil | 23539 | 3 | | R/C | | R/C | | x | | R/C | |
| Cambio de valvulas antirretorno de lubricacion /Non return valve for oil change | Valvula antirretorno de lubricacion / Non return valve for oil | 23539 | 3 | | x | | x | | x | | x | El conjunto trampa de aire se coloca uno en cada etapa de compresion y la valvula antiretorno uno en cada portapaquete / The air traps are installed in each cylinder and the NRV are installed in each packing seal assembly. |
| Cambio de Distribuidor de aceite / Oil didtributor change | Conjunto trampa de aire / Air trap assembly | 120857 | 1 | | R/C | | R/C | | x | | R/C | |
| Cambio de distribuidor de aceite / Oil distributor change | Modelo vigente / Current model | 120851 | 1 | | | | | x | | | | Modelo discontinuado 120134-2 / Old model 120134-2 |
| Cambio de Distribuidor de aceite / Oil didtributor change | Valvula antirretorno (salida) / Check valve (outlet) | 120864 | 5 | | R/C | | R/C | | R/C | | R/C | |
| Cambio de Distribuidor de aceite / Oil didtributor change | Valvula antirretorno (entrada) / Check valve (inlet) | 120864-1 | 1 | | R/C | | R/C | | R/C | | R/C | |
| Cambio de Distribuidor de aceite / Oil didtributor change | Sensor de proximidad / Proximity switch | 120866 | 1 | | R/C | | R/C | | R/C | | R/C | |

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| Cambio de Distribuidor de aceite / Oil distributor change | Indicador de ciclos / Cycle indicator | 120867 | | 1 | | R/C | | R/C | | R/C | | R/C | |
| Cambio de Distribuidor de aceite / Oil distributor change | Colector / Manifold | 120851-1 | | 1 | | R/C | | R/C | | R/C | | R/C | |
| Reparar bomba a engranajes/ Gear pump repair | Bomba a engranajes / Gear pump | 100055 | | 1 | | | | | X | | | | |
| Reparar bomba pistón/ Cam pump repair | Reten SAV 6174 / SAV 6174 oil seal | 120272 | | 1 | | X | | X | | X | | X | |
| | Revisión bomba/cambio/ Cam pump checking / change | 100091 | | 1 | | | | X | | | | X | |
| Engrase bomba pistón / Cam pump grease complete change | Grasa Loctite 51242 / Loctite 51242 | | | 1 | X | X | X | X | X | X | X | X | Grasa de alta presión / Extreme pressure grease |
| Engrase de rodamientos de motor electrico /Electric motor ball bearings greased | Ver grasa recomendada en chapa motor / See recommended grease to nameplate motor | | | 1 | X | X | X | X | X | X | X | X | Verificar en el manual del motor las variaciones de cambio de grasa en funcion de la temperatura de trabajo / Verify in the motor user manual the type of grease according the temperature and working condition |
| Cambio completa de grasa de rodamientos de motor electrico / Electric motor ball bearings grease complete change | | | | 1 | | | X | | | X | | | |
| Medicion de aislacion de bobinados de motor principal / Main motor winding insulation measurement | | | | | | | X | | | X | | | |
| Cambio de rodamientos de motor principal /Main electric motor ball bearings change | Ver codigo en chapa motor / See codes on the nameplate motor | | | 1 | | | | | | X | | | |
| Cambio de rodamientos de motor de aero enfriador / Air cooler motor ball bearings change | | | | 1 | | | | | | X | | | |
| Cambio de rodamientos motor bomba a leva / Cam pump motor ball bearing change | | | | 2 | | | | | | X | | | |
| Cambio de valvulas de seguridad (si fuese necesario) / Safety valve change (Only if necessary) | Juego de valvulas de seguridad / Safety valve set | 26019 | | 1 | X | X | X | X | X | X | X | X | O Cada 1 año de operación / Or one operation year |
| | | 26110 | | 1 | X | X | X | X | X | X | X | X | O Cada 1 año de operación / Or one operation year |
| | | 26121 | | 1 | X | X | X | X | X | X | X | X | O Cada 1 año de operación / Or one operation year |
| | | 26122 | | 1 | X | X | X | X | X | X | X | X | O Cada 1 año de operación / Or one operation year |
| | | 26115 | | 1 | X | X | X | X | X | X | X | X | O Cada 1 año de operación / Or one operation year |

ANEXO VÁLVULAS / VALVE'S ANNEX

[illegible]



4

03/07/2012

[illegible]

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| Revisar Valvula de alivio / Check relief valve | Valvula Abac 1/4" 10Bar / 10Bar 1/4" Abac valve | 23787-1 | | R/C | R/C | R/C | R/C | R/C | R/C | R/C | R/C | |
| | Valvula Abac 1/4" 275 Bar / 275 Bar 1/4" Abac valve | 120019-2 | | R/C | x | R/C | x | R/C | x | R/C | x | |
| | Valvula Abac 1/4" 7Bar / 7Bar 1/4" Abac valve | 24133 | | R/C | R/C | R/C | R/C | R/C | R/C | R/C | R/C | |
| | Valvula Abac 1/4" 26Bar / 26Bar 1/4" Abac valve | 24545 | | R/C | R/C | R/C | R/C | R/C | R/C | R/C | R/C | |
| | Valvula Abac 1/4" 75Bar / 75Bar 1/4" Abac valve | 120627 | | R/C | R/C | R/C | R/C | R/C | R/C | R/C | R/C | |
| | Valv Abac 1/4" 100Bar / 100Bar 1/4" Abac valve | 120019-1 | | R/C | R/C | R/C | R/C | R/C | R/C | R/C | R/C | |
| Horas de trabajo / Working hours | | | | | | | | | | | | |
| Emission: Aprobacion: | Daniel Noez Pablo Rodriguez | | | | | | | | | | | |

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| <p>* El mantenimiento debe realizarse cada 3000 hs o 6 meses (aquellos que suceda primero) /The maintenance must be done every 3000 hs or 6 months, whatever comes first</p> | <p>x : Realizar el Cambio / sustitución directa del producto o conjunto, saltar solo si se realizo cambio en una Revisar anterior / To be replaced directly</p> <p>R/C : Revision y/o cambio / Check or replace</p> <p>o : Realizar un control, o accion como calibración, limpieza, engrase, etc / To be checked - calibrated - cleaned or greased</p> |
|--|---|