Technical Manual

TEREX MINING

AUST_OPT

SLEW TRANSMISSION RESERVOIR GROUP

A100082

Item	Quantity	P/N	see page	Description
1	1	A090143		TANK
2	1	A090144		MOUNTING BRACKET
3	4	1951199		SIGHT GLASS
4	4	A060019		FILLER CAP
5	4	A060020		BREATHER
7	16	10675		FITTING L18
8	6	56672		M12x40 LG BOLT
9	6	57130		M12 NUT
10	6	61768		M12 LOCKWASHER
11	1	A030051		HOSE KIT

NOTICE:

To ensure that all information and procedures contained within this manual are accurate and provide the latest available technology, standards and practices, Air International Transit reserve the right to alter and update this manual.

Please ensure that this manual is the most recent available version.

Air International Transit

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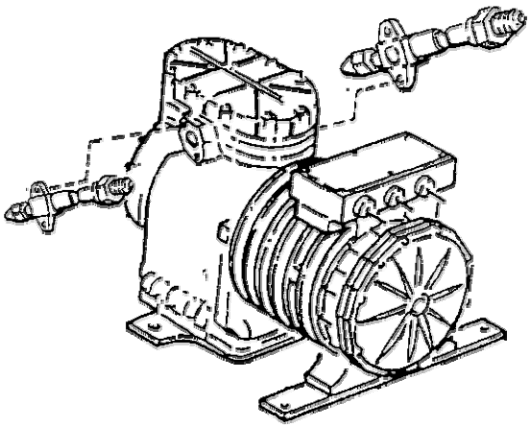
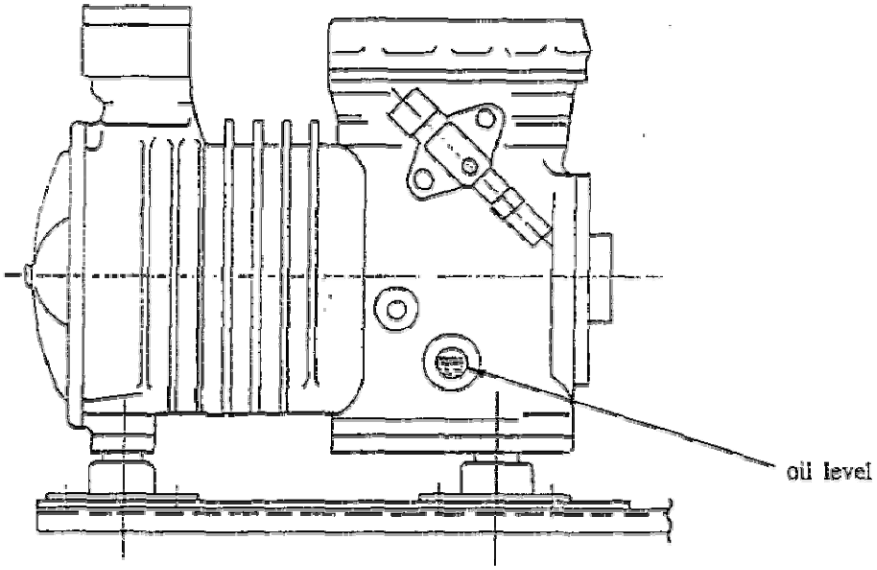
4.2.2 Semi – hermetic Compressor (TFC8BX2)

1. Silver Braze the flare fittings onto the compressor service valves as shown below.



2. Check the oil level. The oil level must be 1/3 to 2/3 of the way up the sight glass. If the oil level is low, add oil until the level is within the required range. (ICI Ester oil RL32S)



3. Mount Anti-Vibration mounts to the compressor as shown on Drawing No. AS243041 (Compressor General Arrangement).

4. Position the compressor assembly on the mounting platform.

4.3 POWER SUPPLY CONNECTION

Check power supply to unit. Alternator capacity must be sufficient for air conditioners as well as other accessories; determine if night operation is required.

1. Connect the electrical supply wiring harness to unit and run wiring to clutch and power source ensuring that it is suitably secured and does not run over hot exhausts, etc.

5.2 MODE SWITCH

This switch controls the unit function and provides for either 'VENTILATION'. 'COOLING', 'HEATING' or 'DEMISTING'. For all modes except ventilation, electrical power, compressor power and hot water need to be supplied to the system. The ventilation mode only requires electrical power to be supplied. For any mode to function, a fan speed must be selected. The fresh air pressuriser unit operates automatically in any mode whenever the unit is 'ON'. The condenser fans operate automatically only in the 'COOLING' and 'DEMISTING' modes whenever the unit is 'ON' and the thermostat calls for cooling.

5.2.1 VENTILATION

This mode provides for supply air fan operation only, at whatever fan speed is selected. No cooling or heating takes place except for the effect of recirculated air movement over the body. Because the pressuriser fan is operating as well, it is recommended that this mode be used if neither heating or cooling is required so that the cab remains dust free.

5.2.2 COOLING

This mode energises the compressor circuit via the thermostat so that cooling of the cab environment takes place. Maximum cooling is obtained when fan speed is set on 'HI' and the thermostat is turned fully counter-clockwise. When the cab temperature is reduced to a comfortable level, then fan speed and/or the thermostat can be altered to maintain that level.

5.2.3 HEATING

This mode energises the heater hot water solenoid valve, or heater contactor, via the thermostat so that heating of the cab environment takes place. Maximum heating is dependent on water temperature but is obtained when fan speed is set on 'HI' and the thermostat is turned fully clock-wise. As for cooling, both these controls can then be adjusted to maintain a comfortable cab temperature.

5.2.4 DEMISTING

In this mode both the compressor, heater solenoid valve, or heater contactor circuits are energised with only the compressor being controlled by the thermostat. The heater valve remains fully open at all times in this mode. Maximum demisting ability is obtained when fan speed is set on 'LO' and the thermostat is turned fully counter-clockwise. However the fan speed may have to be increased to fully demist a window if it is located too far from the supply air outlet.

The drier is isolated to minimise gas loss on replacement.
To remove:

1. Shut off line valve at condenser coil outlet
2. Run compressor and pump down liquid line.
3. Shut off line valve upstream of drier.
4. Remove and replace.

Note: ***Ensure both line valves are reopened once drier is replaced. An access port is provided to evacuate this section prior to re-opening.***

6.3.6 PRESSURE CONTROL SWITCHES

These are fully sealed, pre-set, non-serviceable components. It should be noted that they are fitted on Schraeder valves and can be replaced without loss of gas.

6.3.7 THERMAL EXPANSION VALVE

This valve is factory set to provide the correct balance of pressure and temperature at the evaporator. Service on this valve is limited to the removal and cleaning of the wire gauze filter at the valve inlet. To remove the filter proceed as follows -

1. Shut off line valve upstream of TX valve.
2. Run compressor and pump down evaporator coil and suction line.
3. Close compressor suction service valve.
4. Remove the lagging compound from around the valve.
5. Remove the valve assembly from the refrigeration system.
6. Using a sharp instrument carefully prise out the conical shaped strainer from the inlet port.

   Note: ***Care must be taken not to tear the wire gauze.***

7. Carefully wash the gauze in a suitable solvent.
8. Installation is a reversal of the above procedure.
9. Ensure line and service valves are reopened once complete.

WARNING: ***If the filter blockage is due to a concentration of small white balls it is possible that the desiccant has become dislodged within the receiver drier. If this is the case, the entire system will have to be flushed out and a new receiver drier installed.***

6.3.8 RETURN AIR FILTER

The return air filter should be periodically removed and cleaned, as noted on the Maintenance Schedule Chart.

6.3.9 COMPRESSOR

For compressor service refer to relevant manufactures service manuals.

7.2 FAULT ANALYSIS CHART NOTES Cont'd

7.2.6 THERMAL EXPANSION VALVE TOO LARGE

If a replacement thermal expansion valve has been improperly selected, and its capacity is too great for the system, the valve will not maintain a consistently level suction pressure. The thermal bulb will attempt to control the flow of liquid at its superheat setting, but the oversized valve port will pass liquid too rapidly. The presence of liquid near the thermal bulb will close the valve and the pressure in the evaporator will drop until the valve opens to pass another "slug" of liquid. This "hunting" will cause a suction pressure variation noticeable on the suction pressure gauge.

7.2.7 THERMAL EXPANSION VALVE TOO SMALL

If the replacement thermal expansion valve is too small, it cannot pass a sufficient amount of liquid to satisfy the evaporator. Under conditions of heavy load, the superheat will be excessive and the system will lose capacity. Under conditions of light load, the system may function properly. Too small expansion valves usually result in abnormally low suction pressure.

7.2.8 THERMAL EXPANSION VALVE IS OBSTRUCTED

Unless the expansion valve is properly protected by a strainer or filter, foreign matter may obstruct the valve port. If the obstruction is small, the resulting operation will be much the same as though the valve were undersized as described in 7.2.7 above. If the obstruction holds the valve open during shutdown, the operation will be as described in 7.2.2 and 7.2.3. An obstructed expansion valve is usually indicated by a partly warm evaporator.

7.2.9 SHORTAGE OF REFRIGERANT

A shortage of refrigerant will be initially indicated by bubbles in the sight glass. Frequently there will be a hissing or whistle at the expansion valve. The coil and suction line will be relatively warm while the suction pressure will be low due to little or no liquid being supplied to the evaporator if the shortage is severe.

7.2.10 OVERCHARGE OF REFRIGERANT

An overcharge of refrigerant will cause high head pressure. Liquid will back up in the condenser and decrease the amount of surface available for condensing and as a result the head pressure will rise. In extreme cases, it may rise to a point where high pressure cut-out will stop the compressor. This may result in "short cycling", (compressor cycles too frequently).