Technical Manual

TEREX MINING O&K	AUST_OPT	AUSTRALIAN OPTIONS RH170022-170025 - BMA	BMA170

TEREX MINING D&K	AUST_OPT	GRACO GREASE FILTER	218-029

Item	Quantity	P/N	see page	Description
3	1	104-361		O-RING; TEFLON ◆
4	2	162-453		NIPPLE; ¼ NPSM x ¼ NPT
5	1	167-025		SCREEN, STAINLESS STEEL; 60 MESH ◆
6	1	186-075		SUPPORT, FILTER; POLYETHYLENE
7	1	179-773		BOWL, FILTER; CARBON STEEL
8	1	171-941		SPRING, COMPRESSION; STAINLESS STEEL
9	1	171-942		HOUSING, FILTER; CARBON STEEL
10	1	100-509		PLUG, PIPE; ¼ NPT
11	1	157-350		ADAPTER, 3/8 NPT x ¼ NPT
				◆ KEEP THESE SPARE PARTS ON HAND TO REDUCE DOWN TIME

Sigma Manual:	SM278-2715
Series:	TFC8 & TCF8
Type:	8kW Split System
Applications:	Off Road, Heavy Duty Mining
Issue:	'H'
Date:	9th October, 2002

T8 SERIES SPLIT SYSTEM AIR CONDITIONING MANUAL

Air International Transit

Manual No: SM278-2715
Issue 'H': September 2002

SECTION 3.0 TECHNICAL DATA AND CONTROL SETTINGS

3.1 REFRIGERATION SYSTEM SETTINGS

All pressure controls are hermetically sealed and are of automatic reset type.

Low Pressure Switch (LP)	Cut out	:	35 kPa	(5 psi)
	Cut in	:	205 kPa	(30 psi)
High Pressure Switch (HP)	Cut in	:	1450 kPa	(210 psi)
	Cut out	:	2410 kPa	(350 psi)

3.2 ELECTRICAL EQUIPMENT SETTINGS

3.2.1 ELECTRICAL DEMAND (AMPS)

	24 V DC	415V AC
Evaporator Fan Motor (ea)	10.5	---
Condenser Fan Motor (ea)	10.0	---
Pressuriser Fan Motor	1.5	---
Compressor	---	12
Electric Heater	---	7.2

Total Demand	TFC8BX1	22.5	---
	TFC8BX2	22.5	19.2
	TCF8	20	---
Note: Clutch current is excluded			

3.2.2 CIRCUIT BREAKERS

Four (4) or six (6) circuit breakers are located near the evaporator section of each unit and a main circuit breaker is supplied loose with each unit (excluding condenser unit TCF6). These circuit breakers are non adjustable. See Table 3.2 for individual ratings.

TABLE 3.2

CIRCUIT BREAKER RATING		
CIRCUIT BREAKER	**415V AC**	**24V DC**
Main CB	---	60A
Evaporator Fan Motor	---	25A
Pressuriser Fan Motor	---	5A
Condenser Fan Motor	---	35A
Compressor Clutch	---	5A
Compressor (CBC)	7.5A	---
Heating Elements (CBH)	16A	---

4.7 SYSTEM CHARGING

The charging operation should be performed at air temperatures of 21°C and above. Changes in ambient air temperatures, and to a lesser degree humidity, will affect the systems ability to take a charge and will vary gauge readings. Refer to the Temperature/Pressure Chart in section 7.1 (Table 7.1.1) for the suggested pressure readings in the ambient temperatures being experienced during system charging.

When adding partial charge to a system it is not necessary to discharge and evacuate if there is no evidence of air in the system and there are no system leaks.

Note: Up to 0.2 kg of refrigerant loss per year is considered normal. Operating the unit periodically during the off-season will lubricate system seals and reduce the possibility of refrigerant loss.

To correctly charge the system refer to Fig. 4.7 and proceed as follows:

1. Install gauge set and purge hose if a partial charge is to be added. Gauge set should already be installed and holding a vacuum if a full charge is to be added. The manifold hand valves should be closed.
2. Loosely connect the charging line from the cylinder of R134a refrigerant to the manifold gauge set.
3. Ensure that the charging line connection to the cylinder is fully secured and that the cylinder stands vertically upwards, to ensure that only refrigerant vapour can be charged into the system.

WARNING: DO NOT invert the R134a container. Liquid refrigerant entering the low side of the system will permanently damage the compressor.

4. Crack the cylinder valve sufficiently to purge the charging line and then tighten the charging line connection onto the manifold.
5. Return the compressor suction service valve to the midway position to open the charging port.
6. Run the engine at 1500 r.p.m., select HIGH COOL on the Main Control Switch.
7. Slowly open the low pressure gauge manifold hand valve allowing the system to draw refrigerant vapour from the charging cylinder.

WARNING: DO NOT open the high pressure gauge hand valve while charging.

8. Continue charging until the bubbles disappear from the receiver drier sight glass. At this point the system should be fully charged with approximately 2 kg of R134a.
9. Close the low pressure gauge hand valve and switch off the engine.
10. Test the complete system for leaks, especially around hose connections.
11. Fully back-seat the compressor suction service valve, close the charging cylinder valve and disconnect the charging hose.

6.1 MAINTENANCE SCHEDULE Cont'd

ATTENTION

The air conditioning system must be run for a minimum of five minutes each week regardless of the season.

The compressor oil level should be checked whenever the refrigeration system has opened due to breakdown.

ATTENTION

All work carried out on Sigma Equipment should be done by qualified tradesmen who adhere to the relevant refrigeration codes of practise.

7.1 FAULT ANALYSIS CHARTS Cont'd

SYSTEM COOLS INTERMITTENTLY