MASTERCOOL AG AIR INC.

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IDENTIFICATION OF

SANDEN COMPRESSORS

Identification of most Sanden compressors requires determining four specification classes. All measurements are taken in millimeters.

1. Coil voltage and type
2. Clutch identification
3. Compressor body identification
4. Head type identification

Fig. 1

Fig. 2

Fig. 3

1. COIL VOLTAGE AND TYPE

Coil Voltage

Using a ohm/multimeter, determine the coil resistance. (Fig. 1)

12 volt coil resistance should measure between 2.8Ω and 4.4Ω at room temperature.

24 volt coil resistance should measure between 14.0Ω and 18.2Ω at room temperature.

Coil Type

One Wire - one lead to wire harness, other grounds to grounding screw on compressor body or to coil itself. (Fig. 2)

Two Wire - both wires connect to wire harness. (Fig. 3)

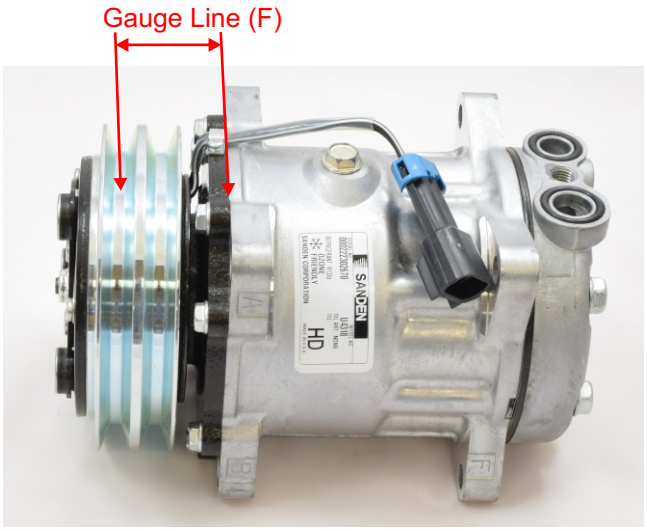

Fig. 4

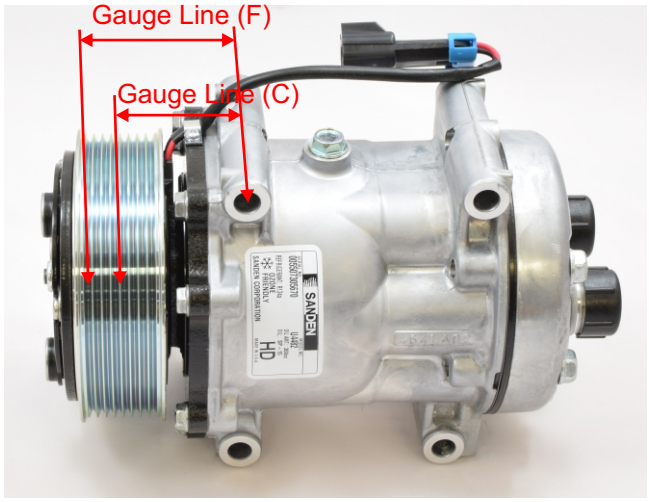

Fig. 5

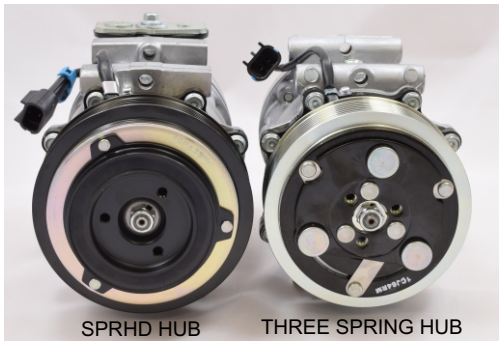

Fig. 6

Fig. 7

2. CLUTCH IDENTIFICATION

Determine pulley diameter

Count pulley grooves (valleys only)

A1 - One 1/2" Groove
A2 - Two 1/2" Grooves
C1 - 1/2" thru 3/4" Varible-Groove
PVx - Multi-Rib/Poly-V Belt
(x = Number of grooves)

Measure Gauge Line

Gauge Line (F) = center of belt groove closest to clutch hub (front)
Gauge Line (C) = center of belt on PV clutch or center of rear groove on A2 clutch (closest to compressor)

Ear Mount Compressors
Measure from the front machined surface of any four of front mounting ears to the center of the front pulley groove (valley) of clutch. This also applies to PV belt (serpentine) pulleys. (Fig. 4)

Direct Mount Compressors
Measure from the center of mounting hole (closest to clutch) to the front pulley groove (valley) of clutch. This also applies to PV belt (serpentine) pulleys. (Fig. 5)

Note: Depending on specifications, it may be necessary to measure to the center of the grooves (center of belt) for PV belt (serpentine) applications.

Determine hub type and clutch cover

Hubs
There are two different types of clutch hubs. (Fig. 6) "Three Spring" hubs feature three leaf springs that drive the compressor. They are the most common.

"SPRHD" or Super Heavy Duty compressors feature a rubber hub ring that drives the compressor. They are frequently used on heavy duty trucks today.

On most applications, you can interchange compressors with both hubs.

Covers
Some clutches have dust shields. These compressors are designated by "SHD" or Sealed Heavy Duty on the label. (Fig.7)

Fig. 8

Short Body

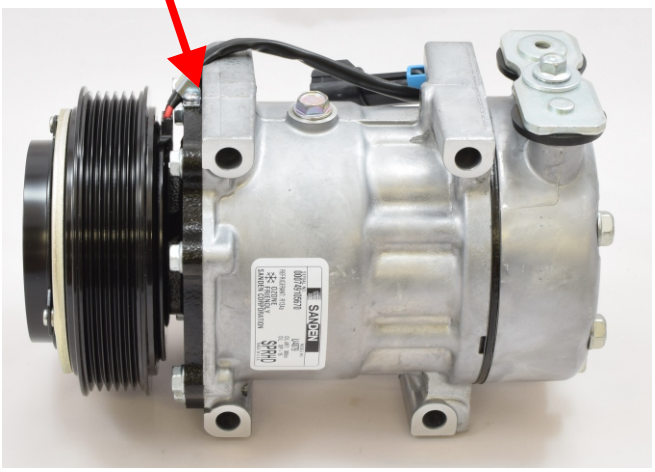

Fig. 9

Long Body

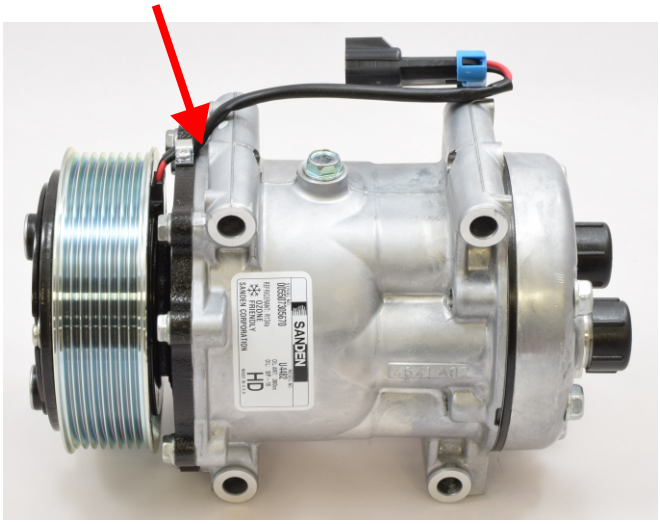

Fig. 10

3. COMPRESSOR BODY IDENTIFICATION

Ear Mount

Eight total mounting ears. Four on the front of body and four on rear. Holes are not threaded. (Fig. 8)

Direct Mount Short

Four transverse mounting holes. Holes are not threaded. (Fig. 9)

Direct Mount Long

Four transverse mounting holes. Holes are not threaded. Body casting extends 5mm forward of front mounting hole casting.(Fig. 10)

Swing Mount

Found on smaller equipment. Normally three or four ears. Holes could be threaded.

4. HEAD TYPE IDENTIFICATION

Bolt Pattern

The most common head type is the six bolt head used on 7H series compressors (Fig. 11). The 5H series uses a five bolt pattern (Fig 12).

Note: Heads can have different thicknesses, requiring different length of head bolts. Check bolt length if changing to different style head.

Fig. 11

Head Model

Most heads are stamped with an one to three letter model code. Newer styles have four digit number stamped on the inside of the head.

Ports

Some heads have ports for relief valves, switches, and charge ports. If a head style code ends in an “A”, it usually signifies it has a relief valve port.

Fittings

Head fittings can be positioned horizontally, vertically, or laterally. Fitting style can range from flare, o-ring, tube-o, pad, or speciality fittings.

Fig. 12

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SANDEN COMPRESSOR

SPECIFICATION CHECKLIST

Model Number: _____

Coil Voltage: _____12 Volts _____24 Volts

Coil Type: _____One Wire _____ Two Wire

Pulley Diameter: _____ millimeters

Number of Pulley Grooves: _____

Gauge Line: _____ millimeters

Hub Type: _____ Three Spring _____SPRHD

Dust Cover: _____ Yes _____ No

Compressor Body: _____ Ear Mount _____ Swing Mount

_____ Direct Mount Short _____ Direct Mount Long

Head Bolt Pattern: _____ Six Bolt _____ Five Bolt

Head Model: _____

Head Ports: _____ Relief Valve _____ Charge Ports

_____ Switch Port

Head Fittings: Type: _____ Size:_____