

INGERSOLL-RAND

HP400 COMPRESSOR

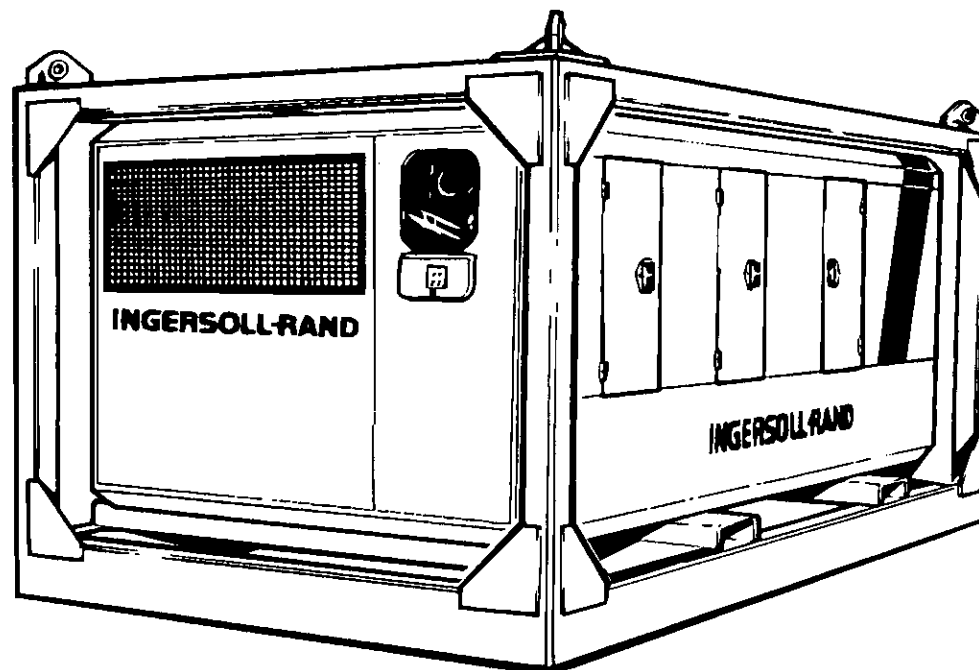
COMPRESSOR CATERPILLAR ENGINE
OPERATION AND MAINTENANCE MANUAL
with parts catalogue

KOMPRESSOR MOTOR CATERPILLAR
DRIFTS-OG VEDLIGEHODELSESMANUAL
med reservedelsliste

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CATERPILLAR ENGINE



SERIAL NUMBER RANGE

790001

TO

790050

In preparing this publication, every effort has been made to provide sufficient information to permit an operator to perform his duties so as to receive maximum performance and trouble free service from the compressor. All classes of equipment, regardless of how well built, require a certain amount of attention. The purpose of this publication is to acquaint an operator with the functions, operation and servicing of the various components, which were built with the very best of materials and workmanship, to obtain maximum life from the compressor.

Before starting the compressor, the instructions should be carefully read to obtain a thorough knowledge of the duties to be performed. Take pride in the compressor, keep it clean, and in good mechanical condition. For major servicing, not covered in this publication, consult your nearest Ingersoll-Rand Company branch office, or the distributor from whom the compressor was purchased.

Correspondence with a distributor must always specify the serial number of the compressor as well as the model.

Formålet med denne manual har været at sørge for al nødvendig information til brugeren, og derved optimere brugerens udbytte af kompressoren og minimere reparationer. Alle maskiner ligegyldig hvor godt de er fremstillet har brug for korrekt behandling. Formålet med denne manual er derfor at give operatøren mulighed for at bruge maskinen rigtig og give ham mulighed for at give maskinen den daglige service. Denne maskine er bygget af de bedste materialer, for derved at give kompressoren maximal levetid.

Denne manual bør læse grundigt igennem før maskinen startes op. Sørg altid for at maskinen er rengjort og i mekanisk god stand. Større serviceeftersyn er ikke dækket af denne bog, kontakt venligst Ingersoll-Rand's agent/servicecenter.

Opgiv altid model og serie nummer.

0.1

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INDHOLD

HP400CA
Zone 2

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4	MAINTENANCE Service intervals chart Compressor oil change Compressor oil filters Scavenge tube Compressor oil separator element Engine filters Air intake valve & setting instructions Flame arrestor Heat exchanger Air filter elements Air starter motor Radiator and oil cooler Hoses Fan belt tensioning	VEDLIGEHOLDELSE Service interval Kompressorolie skift Kompressor olie filtre Scavenge rør Kompressor olieseparator og elementer Motor filtre Luftindtag, ventiler og indstilling Gnistfang Varmeveksler Luftfilter elementer Luft starter motor Køler – og olie køler Slanger Kileremmenes stramning
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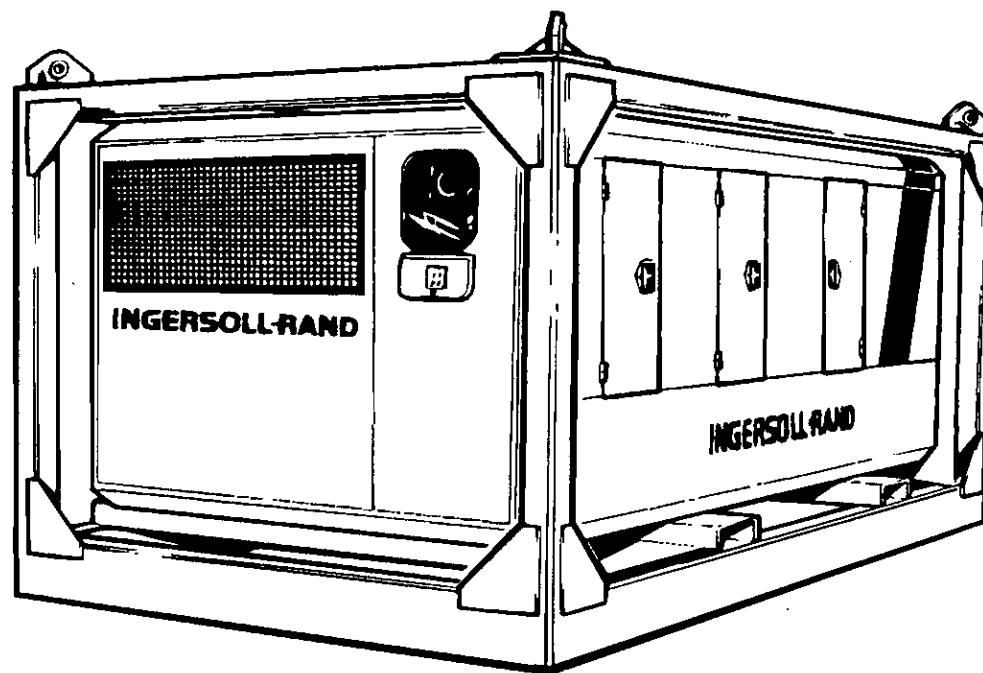
INGERSOLL-RAND

HP400 COMPRESSOR

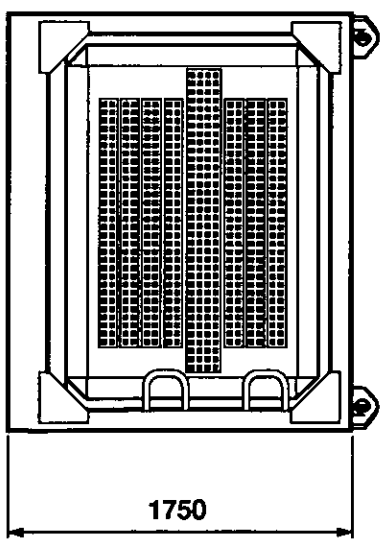
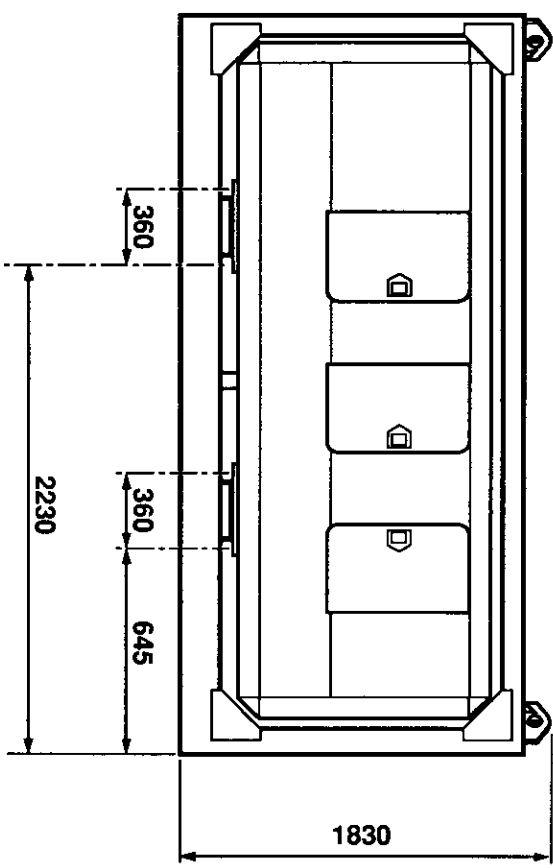
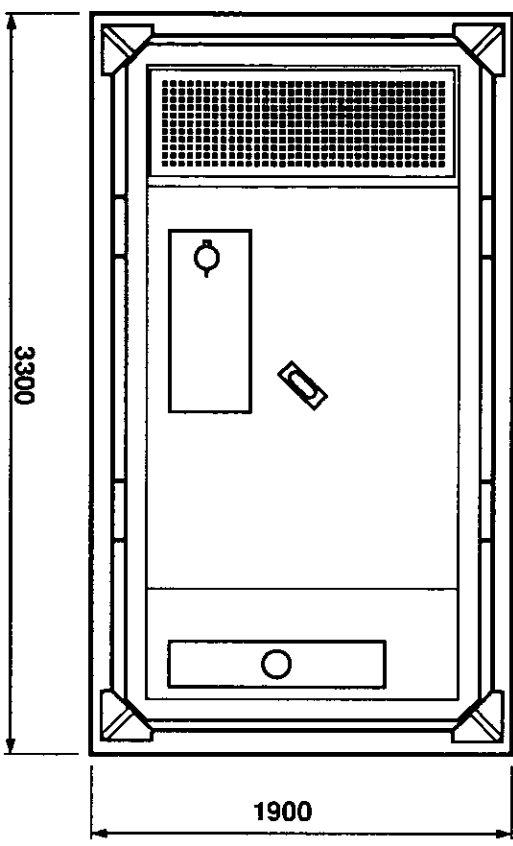
OPERATION AND MAINTENANCE MANUAL

DRIFTS-OG VEDLIGEHOELDESESMANUAL

CATERPILLAR ENGINE



T1960



HP400CA
Zone 2

COMPRESSOR

Model	HP400
Actual Free Air Delivery	400 cfm
Normal Operating Pressure	10.3 bar (150psig)
Maximum Pressure	11 bar (160 psig)
Cooling System	Oil Injection
Lubricant/Coolant Capacity	45 litres

ENGINE

Model	Caterpillar 31166
Number of Cylinders	6
Oil Capacity	14 litre
Speed at Full Load	2500 rpm
Speed at Idle	1200 rpm
Fuel Tank Capacity	220 litre
Cooling System Capacity	80 litre
Anti-freeze Capacity	40 litre

WEIGHTS

Flame Trap	44Kg
Shipping	3300Kg
Gross (including cradle)	3700Kg
Cradle	710Kg

KOMPRESSOR

Model	HP400
Afgivet luftmængde	400 cfm
Normal tryk	10,3 bar (150psig)
Max. tryk	11,0 bar (160psig)
Kølesystem	Olieindsprøjtning
Oliekapacitet	45 ltr

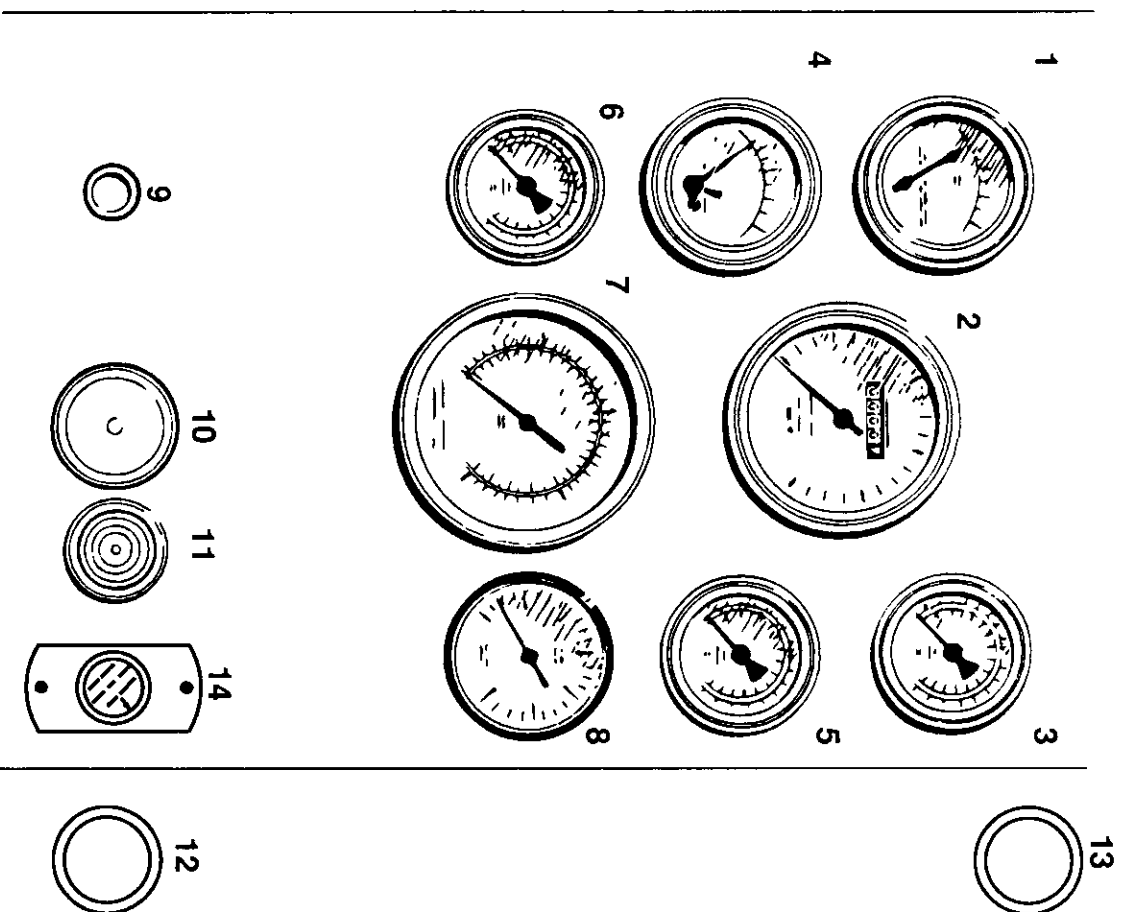
MOTOR

Model	Caterpillar 31166
Antal cyl.	6
Oliekapacitet	14 ltr
Omdr. fuld kraft	2500rpm
Omdr. tomgang	1200 rpm
Brændstoftank	220 ltr
Kølesystem	80 ltr
Frostvæske	40 ltr

VÆGT

Gnist fang	44Kg
Transport vægt	3300Kg
Max. væg inkl ramme	3700Kg
Vægt af ramme	710Kg

Revision 01
06/92



1. Engine Water Temperature Gauge.

Maximum temperature 100C.

2. Engine R.P.M. and Hour Counter.

Measures engine speed and the number of hours the machine has been operating. This gauge should be used to give service intervals

3. Engine Oil Pressure Gauge.

Depending on type of engine and efficiency of engine. This gauge should read approximately 60 p.s.i.

4. Compressor Oil Temperature Gauge.

Maximum temperature 120C.

5. Air Start Pressure Gauge.

Measures air pressure in air start system. At 130 lb.sq.in. will start the engine three times. A minimum of 50 lb.sq.in. is required to start the engine once.

6. Safety System Pressure Gauge.

Should show a pressure of 80 p.s.i. plus.

7. Air Discharge Pressure gauge.

Shows air pressure available at service valve.

8. Exhaust Temperature Gauge.

Measures temperature at surface of exhaust system (maximum 200C.).

1 Kølevandstermometer

Max. 100C

2 Omdrejnings- og timetæller

3 Olietryk

4 Olietemperatur kompressor

Max. temperatur 120C

5 Luft start manometer

130 Lb. sq.in – vil motoren kunne starte 3 gange. Motoren har brug for minimum 50 Lb. sq.in. for at starte.

6 Sikkerhedssystem manometer

Skal vise et tryk på 80 psig +

7 Afgangstryk manometer

8 Udstødningstemperatur

Max. 200C

2.2

OPERATION

DRIFT

HP400CA
Zone 2

9. Push After Warm-up Button.

Refer to 'Starting'.

9 Hjelpe start kontakt

10.Engine Start Button.

Refer to 'Starting'.

10 Start kontakt

11.Reset Button for Safety circuit.

Re-charges pneumatic safety circuit after shutdown.

11 Reset knap

12.Normal Stop Button.

Refer. to 'Stopping'.

12 Stop knap

13.Horn Silencer.

Silences horn which will sound every time the machine stops.

13 Horn

(som vil lyde hver gang maskinen stopper)

14.Override Button.

Enables the machine to be started by overriding the safety circuit.

14 Override knap.



USE ONLY GENUINE INGERSOLL-RAND PARTS

BENYT KUN ORIGINALE INGERSOLL-RAND RESERVEDELE

ANVÄND ENDAST INGERSOLL-RAND ORIGINALDELAR

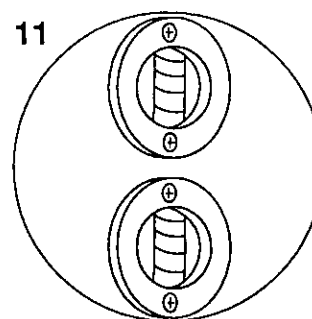
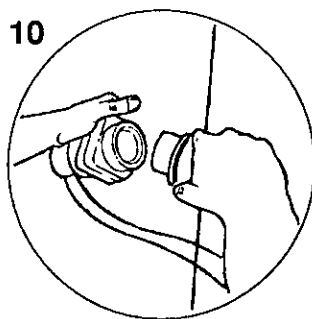
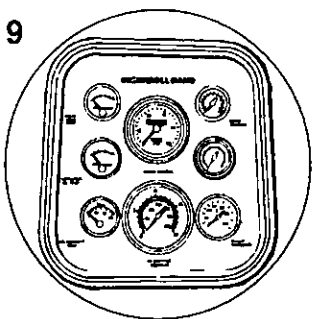
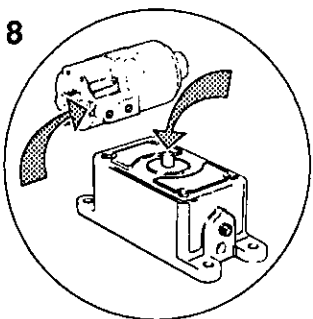
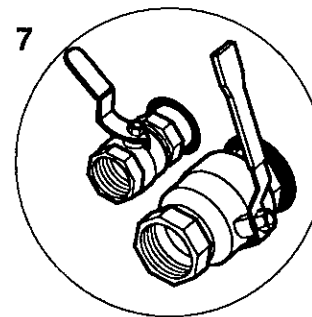
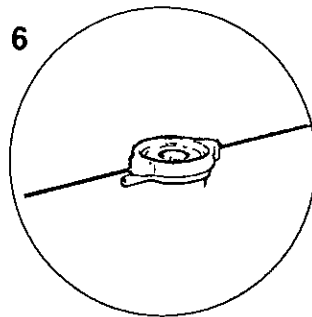
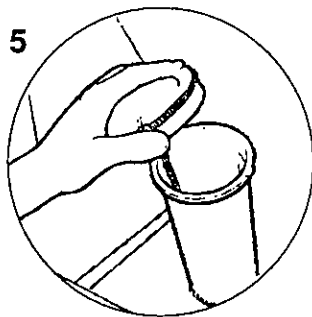
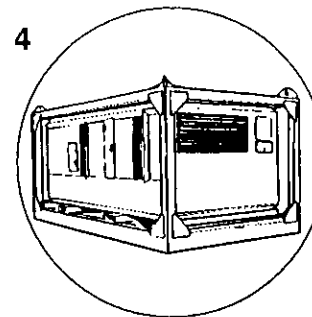
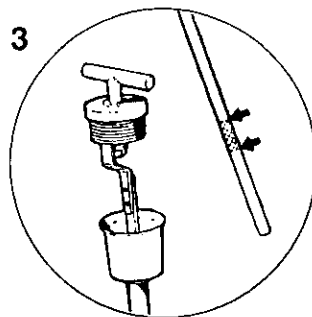
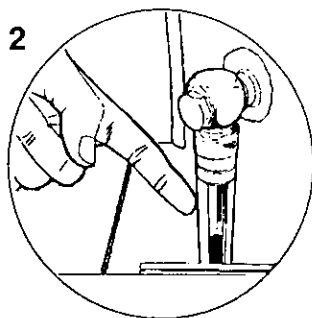
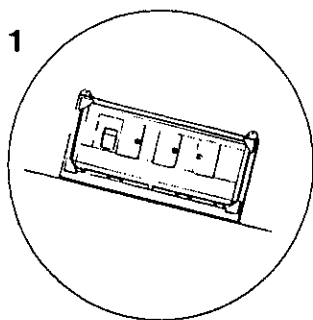
BENYTT KUN ORIGINALE INGERSOLL-RAND RESERVEDELER

2.4

OPERATION

DRIFT

HP400 CA
Zone 2



BEFORE STARTING

1. Place the unit in a level position.
2. Check the compressor oil level in the sight glass situated on the side of the receiver/separator. Oil level should be between maximum and minimum marks.
3. Check engine oil level and add oil if necessary up to "full" mark on dipstick.
4. Check all doors are closed.
5. Check fuel level. If unit has stood for a period without running, turn fuel valve to start position and pump fuel hand pump until pressure shows green on fuel pressure gauge.
6. Check radiator coolant level.
7. Close service valves.
8. Check that speed valve and vibration valve have been reset by pressing reset button on each valve.
9. Check the air-start receiver is charged.
10. Check that yellow alert power supply is connected.
11. Check tell tales are green.

N.B. Engine oil pressure and water loss indicators may show red after normal stopping. If system is functioning correctly the indicators will go to green on start up.

FØR START

- 1 Opstil kompressoren på et jævnt vandret sted.
- 2 Kontroller kompressorens olieniveau i skueglasset på siden af separatorbeholderen. Niveauet skal være mellem minimum og maximum mærket.
- 3 Kontroller motorens olieniveau og fyld op om nødvendigt til max. mærket på oliepinden.
- 4 Kontroller at alle lemme er lukkede.
- 5 Kontroller at der er brændstof på tanken, hvis kompressoren ikke har været i drift i en periode, vend brændstofventilen til start position og brug håndpumpen indtil brændstof mano meteret står på grønt.
- 6 Kontroller kølevæskens.
- 7 Luk service ventilen.
- 8 Kontroller at speed- og vibrationsventilen er blevet resat ved at aktivere reset-knappen på de 2 ventiler.
- 9 Kontroller at startluft beholderen er fyldt.
- 10 Kontroller at den gule start alarm for kraft supplement er aktiveret.
- 11 Kontroller at alle indikatorer står på grønt.

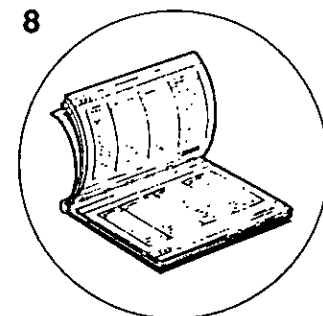
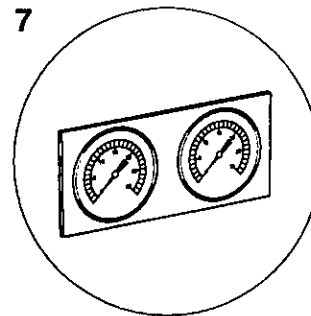
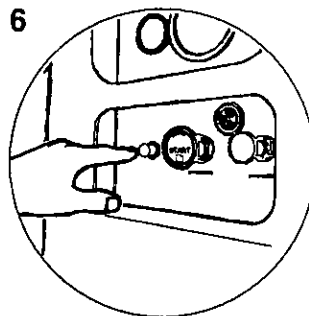
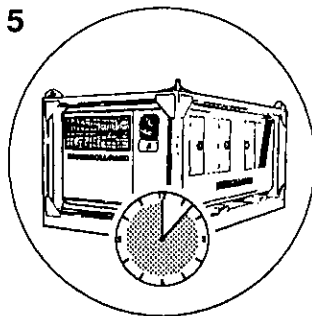
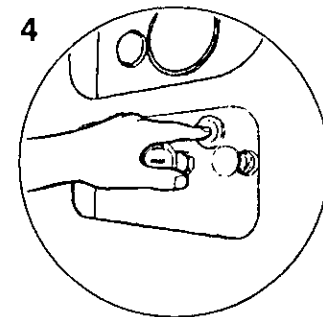
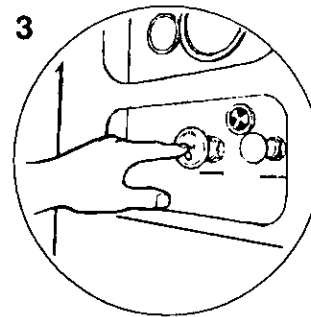
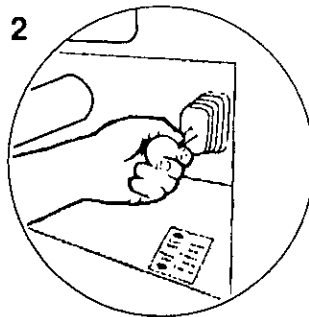
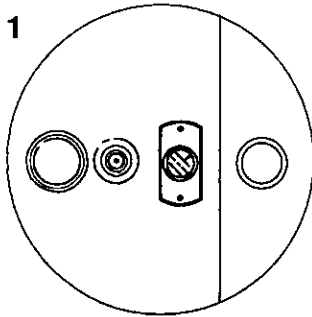
NB! Motorolie manometer og indikator for kølevand kan vise rødt efter normal stop. Hvis alt er i orden, vil de vise grønt ved opstart.

2.6

OPERATION

DRIFT

HP400 CA
Zone 2



STARTING

1. Turn knob on override valve to start position.
2. Lift the Start/Reset/Emergency Stop lever to the Start/Reset position, and hold in position.
3. Press engine Start button. Release Start button when engine fires.
4. Press Reset green button and after 20 seconds release Start/Reset/Emergency Stop lever to central position.
5. Allow machine to warm up for several minutes.
6. Press Start–Run button to engage regulation system.
7. When machine is running at full load check if air filter restriction gauges show less than 30". If not, air filter element service is required.
8. If unit fails to run or shuts down, refer to trouble shooting section of this manual.

STOPPING

1. Close service valve.
2. Allow machine to idle for several minutes.
3. Press normal Stop button.
4. Push Horn Stop button to silence shutdown warning horn.

START

- 1 Drej knappen på brændstofventilen til startposition.
- 2 .Løft start/reset nødstop knappens arm til start, reset position og hold den.
- 3 Tryk på startknappen, slip når motoren starter.
- 4 Tryk på den grønne reset knap og efter 20 sekunder – frigør armen på start/reset/nødstopknappen til central position.
- 5 Lad motoren varme op i nogle minutter.
- 6 Tryk på messing start/run knappen for at aktivere reguleringssystemet.
- 7 .Når maskinen kører i fuld last, kontroller at manometrene for luftfiltrene viser mindre en 30", hvis ikke skal filtrene kontrolleres og eventuelt udskiftes.
- 8 Hvis motoren ikke starter, kontroller da efter fejlsøgnings diagrammet.

STOP

- 1 Luk alle afgangsventiler.
- 2 .Lad kompressoren gå i tomgang i nogle minutter.
- 3 Tryk på stopknappen
- 4 Tryk på alarmstopknappen for at stoppe alarm hornet.

2.8

OPERATION

DRIFT

HP400CA
Zone 2

EMERGENCY STOP

Move Start/Reset/Emergency Stop lever down to stop position.

N.B. Never use Emergency Stop lever for normal stopping as this practice can lead to mechanical damage.

WARNING

If the engine safety system trips whilst the engine is being used in a hazardous area (indicated by a tell tale showing red/white), do not attempt to restart until advice has been obtained from the safety officer or plant supervisor.

NOTE

To prevent condensation building up in fuel tank, refill the tank at the end of every shift.

NØDSTOP

Flyt start/reset/nødstop armen ned til stop position.

NB! Brug aldrig nødstop armen til normal stop, da dette kan medføre mekaniske skader.

ADVARSEL

Hvis kompressorens sikkerhedssystem stopper maskinen imedens den er i drift i et risiko område, indikeret af en rød/hvid indikator, må der ikke forsøges genstart, før dette er godkendt af en sikkerhedsrepræsentant eller anden overordnet person.

BEMÆRK

For at forhindre at der dannes kondensvand i tanken, bør tanken fyldes efter, for hvert arbejdsshift.



USE ONLY GENUINE INGERSOLL-RAND PARTS

BENYT KUN ORIGINALE INGERSOLL-RAND RESERVEDELE

ANVÄND ENDAST INGERSOLL-RAND ORIGINALDELAR

BENYTT KUN ORIGINALE INGERSOLL-RAND RESERVEDELER

3.0

LUBRICATION

SMØRING

HP400CA
Zone 2

GENERAL

The compressor is initially supplied with Ingersoll-Rand compressor lubricating oil sufficient for the first 500 hours of operation.

Check the compressor and engine oil levels before starting a new compressor.

If for any reason the compressor oil has been drained, it must be refilled with clean new oil recommended by Ingersoll-Rand.

CAUTION

Some oil mixtures are incompatible and result in the formation of varnishes, shelacs or lacquers which may be insoluble. Such deposits can cause serious damage. To avoid such problems always specify Ingersoll-Rand compressor lubricating oil (5 litre container CPN 92735109, 25 litre container CPN 92735117).

ENGINE LUBRICATING OILS

Normal lubricating oil for engine is SAE 10W 30 (MIL-L-2104C-CD).

GENERELT

Kompressoren er ved levering påfyldt tilstrækkelig olie for de første 500 timers drift.

Kontroller kompressorens og motorens olieniveau før opstart af en ny kompressor.

Hvis der mangler olie skal der efterfyldes med ren ny olie af en af INGERSOLL-RAND anbefalet type.

ADVARSEL!

Nogle olietyper kan ikke blandes. Disse olietyper kan ved blanding danne skadelige forbindelser, hvilke kan resultere i alvorlige skader på materiellet. Brug derfor altid SMØREOLIER anbefalet af Ingersoll-Rand.

MOTOR SMØREOLIE

Normal smøreolie for motoren er SAE 10W30 (MIL-L-2104C-CD).

HP400CA
Zone 2

**COMPRESSOR LUBRICATING
AND COOLING OIL
RECOMMENDATIONS**

Ingersoll-Rand compressor lubricating oil is recommended for use in Ingersoll-Rand Portable Compressors, 5 litre container CPN 92735109, 25 litre container CPN 92735117.

This oil conforms to the specifications found in section a) of the following table. If alternate lubricants are used they too should conform to these specifications.

CAUTION:

Care should be taken to ensure that all downstream components will be compatible with synthetic lubricants.

a) AMBIENT TEMPERATURE
-23C ↔ 51,7C

USE LUBRICANT:
MIL-L-46152 - SAE 10W
or
MIL-L-2104B - SAE 10W
or
DEXRON or DEXRON II
AUTOMATIC TRANSMISSION
FLUID

b) AMBIENT TEMPERATURE
-23,3C ↔ -45,6C

USE LUBRICANT
MIL-L-23699B

**ANBEFALET SMØRE- OG
KØLEOLIE**

Ingersoll-Rand kompressor smøreolie anbefalet til brug i transportable kompressorer. 5 ltr dunk CPN nr. 92735109 og i 25 ltr dunk CPN nr. 92735117.

Denne olies specifikationer findes i sektion a) næste side. Hvis alternative smøreolier bruges, bør de være efter samme specifikationer.

BEMÆRK!

Hvis De påtænker at skifte fra mineralisk- til syntetisk olie eller omvendt! Kontakt da Deres olieleverandør. Se! iverigt nedenstående anbefalede olietyper.

a) OMGIVELSE TEMPERATUR
-23C ↔ 51,7C

ANVENDELIG SMØREOLIE:
MIL-L-46/52 - SAE10W
eller
MIL-L-2104B - SAE10W
eller
DEXRON eller DEXRON II
VED AUTOMATTRANSMISSION
(DEXRON)

b) OMGIVELSE TEMPERATUR:
-23,3C ↔ -45,6C

ANVENDELIG SMØREOLIE
MIL-L-23699B

Revision 01
06/92

4.0

MAINTENANCE

VEDLIGEHOLDELSE

HP400CA
Zone 2

SERVICE HOURS	INTERVAL PERIOD	DESCRIPTION	MAINTENANCE REQUIRED
12	daily	Exhaust flame arrestor Check engine & air end lubricant level	Clean element
12	daily	Air filters	Clean dust collector boxes
12	daily	Fuel tank	Refill to prevent condensation
50	weekly	Temperature probes	Visually Check tightness
50	weekly	Fuel shut off valve	Check reset knob
		Compressor oil filter	Replace after first 50 hours from new
100	2 weeks	Shutdown valve and linkage	Inspect lubricate and shutdown test
		Radiator	Check for build up of foreign matter Clean if necessary by blowing out with air or pressure wash
500	6 months	Compressor oil filter	Replace after first 150 hours from new
500	6 months	Compressor oil filter	Replace
500	—	Compressor oil	Replace
500	6 months	Fan belt	Engine
	6 months	Hoses	Inspect
1000	6 months	Engine breather	Clean element
1000	1 year	Air filter elements	Replace
	2 years	Heat exchanger	Clean interior
	2 years	Spark arrestor	Clean interior
As required		Cooling system	Add antifreeze and inhibitor
		Inlet flame trap	Clean element

TIMER	PERIODE	BESKRIVELSE	VEDLIGEHOLDELSE
12	Daglig	Udstødnings gnistfanger	Rens elementet
		Kontroller olieniveau på motor og kompressor	
		Kontroller luftfiltre	Rens støvsamlere
		Kontroller brændstof	Efterfyld
50	Urgentlig	Temperaturfølere	Kontroller at de sidder fast.
50		Brændstof lukke ventil	Kontroller reset knap
		Kompressorens oliefilter	Skift efter 50 timer Ved ny kompressor
100	Hver anden uge	Shut down ventil og forbindelser	Inspicer, smør og udfør shut down test
	Månedlig	Kølere	Kontroller at kølerne er rene, rens om nødvendigt
		Kompressorens oliefilter	Skift efter 150 timer Ved ny kompressor
500	Efter 6 mdr.	Kompressorens oliefilter	Skiftes
500		Kompressor olie	Skiftes
500		Ventilatorrem	Efterses
500		Slanger	Efterses
1000	Efter 6 mdr.	Motor indsugning	Rens element
1000	Efter 1 år	Luftfilter	Skiftes
	Efter 2 år	Varme veksler	Renses
	Efter 2 år	Gnistfanger	Renses
Efter behov		Kølesystem	Påfyld frostvæske og kølevæske(vand)
		Indsugnings gnistfang	Rens elementet

4.2

LUBRICATION

VEDLIGEHOLDELSE

HP400CA
Zone 2

COMPRESSOR OIL CHANGE

Replace after 500 hours, or every six months of operation, whichever comes first.

NOTE

If compressor has been operated under adverse conditions, or has had long shutdown periods, an earlier oil change may be necessary as oil deteriorates with time as well as by operating conditions.

WARNING

DO NOT under any circumstances remove any drain plug or open any drain valves from the compressor lubricating/cooling system without first checking all air pressure has been released, by checking discharge pressure gauge and by opening manual blowdown valve located on air regulation manifold behind air inlet filter.

CHANGE PROCEDURE

1. Check that there is no pressure in the system.
2. Remove the plug and drain into a suitable container.
3. When receiver separator tank, piping and oil cooler are completely drained, close the coolant drain valve.
4. Replace the drain plug.
5. Remove the oil filler plug situated on the side of the receiver/separator.
6. Re-fill the lubricating/cooling system until the oil level is between the Maximum. and minimum marks on the oil level gauge.
7. See Section 2 *Before Starting*
8. Start compressor (See 'Section 2 – Operation')
9. Check for leaks.

SKIFT AF KOMPRESSOROLIE

Udskift efter hver 500 driftstimer eller efter 6 mdr's drift, hvad der måtte komme først.

BEMÆRK! Hvis kompressoren har kørt under dårlige forhold eller har stået stille i en længere periode, bør olien skiftes efter kortere intervaller, da olien nedbrydes både under drift og ved stilstand.

ADVARSEL

Prøv aldrig at løsne drænpropper eller at åbne drænventiler i kompressorens smøresystem uden at kontrollere at trykket er fjernet fra systemet. Se manometer for afgangstryk. Hvis der er tryk på systemet, brug da den manuelle blow-down ventil, der er placeret på luftreguleringens manifoldet bag indsugningsfilteret.

UDSKIFTNINGS PROCEDURE:

1. Fjern proppen fra aftapnings ventilen.
2. Åben ventilen og tap af i egnet beholder.
3. Når seperator tanken, rørene og olieålerne er tømt helt, lukkes aftapnings ventilen.
4. Sæt proppen i ventilen.
5. Fjern oliepåfyldningsproppen på siden af seperator tanken.
6. Påfyld olie indtil olieniveauet vises i skueglasset mellem max. og min.
7. Se sektion 2 *Før start*
8. Start kompressor (se sektion 2)
9. Kontroller for utætheder.

HP400CA
Zone 2

COMPRESSOR OIL FILTERS

Replace after the first 50 hours, 150 hours and thereafter every 500 hours or every six months of operation, whichever comes first.

CHANGE PROCEDURE

1. Wipe off any external dirt from the filters to prevent any contamination from entering the lubricating/cooling system.
2. Turn the filters anti-clockwise and remove from housing.
3. Clean gasket seat on the housing.
4. Install new Ingersoll-Rand replacement filters by offering up to the housing and turning clockwise until seal makes initial contact.
5. Tighten a $\frac{1}{2}$ to $\frac{3}{4}$ of a turn.
6. See Section 2 – *Before Starting*
7. Start compressor See 'Section 2 – *Starting*'
8. Check for leaks.

SCAVENGE TUBE

It is good preventative maintenance to check that the scavenge tube is clear of any obstructions each time the compressor lubricant is changed (a blocked scavenge will cause oil carryover).

COMPRESSOR OIL SEPARATOR ELEMENT

Normally the separator element will not require periodic replacement provided that the air and oil filters are properly maintained.

KOMPRESSOR OLIE FILTRE

Skiftes første gang efter 50 driftstimer. Dernæst efter 150 driftstimer og derefter for hver 500 driftstimer eller efter 6 måneders drift, hvad der måtte komme først.

UDSKIFTNINGS PROCEDURE:

1. Tør filtrene og deres omgivelser rene for at forhindre, at der kommer urenheder i oliesystemet, når dette åbnes.
2. Drej filtrene mod uret for at fjerne dem fra huset.
3. Rens pakningen og pakningsfladerne.
4. Skru nye INGERSOLL-RAND filtre på. Drej dem med uret, indtil der er fuld kontakt med pakfladen.
5. Spænd en $\frac{1}{2}$ til $\frac{3}{4}$ omgang.
6. Se sektion 2 *Før start*
7. Start kompressor, se sektion 2 *Før start*
8. Kontroller for utætheder.

SKYLLERØR

Det er en god præventiv vedligeholdelse at kontrollere at skyllerørets lysning er fri for utætheder, hver gang der skiftes olie. (Et blokeret skyllerør vil forårsage oliespild)

SEPERATOR ELEMENT

Normalt skal seperatorelementet ikke skiftes regelmæssigt, hvis kompressor olie og filtre skiftes regelmæssigt.

Revision 01
06/92

4.4

MAINTENANCE

VEDLIGEHOLDELSE

HP400CA
Zone 2

ENGINE FILTERS

All must be serviced in accordance with the instructions found in the engine operator's manual.

AIR INTAKE VALVE

At 100 hours or 2 weeks operation (whichever comes first), inspect the valve linkage and control arm mechanism. Ensure that the roller on the trip lever is free to spin. Lubricate the valve spindle and all pivot points with thin oil.

Carry out an emergency stop test using the Stop/Reset lever by hand or cable. Ensure that the valve moves freely, closes correctly and shuts down the engine.

If the operation of the valve appears satisfactory but the engine does not stop within a few seconds, then the inlet system, including the manifold, should be checked for leaks. Any leaks should be suitably sealed.

AIR INTAKE VALVE SETTING INSTRUCTIONS

Slacken the adjuster until the trip lever spring is just loose. Tighten it nine complete turns, secure the locknut and wirelock the adjuster. Run the engine to maximum speed and check that there is no tendency for the SVD valve to vibrate excessively and shutdown.

When running the engine to check the operation of the valve, restrain the mechanism so that the valve is not allowed to fully close.

When testing shutdown, ensure that this is done at low speed and is not more often than necessary.

MOTOR FILTRE

Alle filtre bør skiftes efter motorleverandørens foreskrifter.

INDSUGNINGS VENTIL

Ved 100 timer eller 2 ugers drift, hvad der måtte komme først. Efterse ventilens forbindelser og kontroller afstandsmekanismen. Kontroller at rullen på udløser-armen løber frit. Smør ventilens spindel og alle bevægelige dele med tynd olie.

Udfør nødstopptest ved at bruge stop/reset armen med hånden eller med kabel. Vær sikker på at ventilen arbejder frit, lukker korrekt og stopper motoren.

Hvis ventilen arbejder tilfredstillende, men motoren ikke stopper inden for få sekunder, skal indsugningssystemet og manifoldet undersøges for utætheder. Enhver utæthed skal forsegles forsvarligt.

INSTRUKTION VEDR. JUSTERING AF INDSUGNINGSVENTILEN.

Slæk justerskruen indtil udløserarmens fjeder er helt uden belastning. Spænd den derefter skruen 9 hele omgange og spænd låsemøtrikken og wire låsen. Lad maskinen køre for fulde omdrejninger og kontroller, at der ikke er tendens for SVD ventilen til at vibrere kraftigt og stoppe maskinen.

Når maskinen kører for kontrol af ventilens funktion, begræns da ventilens arbejdsområde, således at den aldrig lukker helt.

Når shut-down funktionen testes, gør det da altid ved lave omdrejninger og aldrig oftere end nødvendigt.

FLAME ARRESTOR

Fit a clean element every 12 hours or more frequently if necessary. To remove the element, slacken all six captive bolts, draw two captive bolts into loading bracket and half turn anti-clockwise to secure. Pivot flame trap element to approximately 45 deg. and remove. Clean by soaking in carbon removing solvent e.g. Applied Chemicals 8-77, 8-38 or Castrol ICP 140 or similar.

CAUTION

Do not place a hot flame arrestor in the cleaning fluid.

HEAT EXCHANGER

On major overhaul, or in the event of shutdown due to excessive exhaust temperature not reconciled by other checks, clean the heat exchanger interior with a carbon solvent: e.g. Applied Chemicals 8-77, 8-38 or Castrol ICP 140.

Remove the heat exchanger from the machine, blank off the gas inlet ports, and with the outlet uppermost, fill the casing with solvent and allow to soak for four hours. Empty and thoroughly hose out the interior. Remove all fluid from the heat exchanger, repeat if necessary. During this operation, **do not allow solvent into water passages.**

The heat exchanger gas parts should be blown out, refit the cooler and run the engine until warm. Top up the water system and check for leaks. A clean exhaust flame arrestor element must be fitted. It should be noted that after cleaning the heat exchanger, loose carbon particles may be released during the initial period, after which it is necessary to clean the exhaust flametrap.

GNISTFANGER, FLAMMESKÆRM.

Skift elementet efter 12 timers drift eller oftere, hvis det skulle være nødvendigt. For at fjerne elementet, løsne alle 6 bolte, sæt 2 bolte i last konsollet og drej en halv omgang mod uret for sikkerhed. Drej elementet ca 45° og tag det ud. rens det for kulaflejringer ved hjælp af et opløsningsmiddel. Egnede midler: Kemikalie 8-77, 8-38 eller Castrol ICP 140 eller lignende.

ADVARSEL!

Anbring aldrig en varm gnistfanger i renssevæske.

VARMEVEKSLER.

Ved stort hovedreparation eller ved nødstop ved for meget høj afgangstemperatur, hvis årsag ikke kan findes ved normal fejlfinding, Renses varmeveksleren med et egnet opløsningsmiddel eksempelvis: 8-77, 8-38 eller Castrol ICP 140.

Demontér varmeveksleren fra maskinen. Bland indsugningsåbningerne. Fyld veksleren med renssevæske igennem afgangsåbningerne og lad det stå i ca. 4 timer. Rens omhyggeligt omkring varmeveksleren. Fjern al væske, kontroller og gentag rensningen om nødvendigt. Der må under ingen omstændigheder komme renssevæske i vandsystemet.

Varmeveksleren blæses ren, monteres igen og maskinen køres varm. Efterfyld vandsystemet og undersøg for utætheder. Et rent element skal monteres i gnistfangeren. Det bør bemærkes at løse kulpartikler fra renssevæsken kan løsne sig i perioden efter rensningen, det kan derfor være nødvendigt at rense udstødnings gnistfangnet.

4.6

MAINTENANCE

VEDLIGEHOLDELSE

HP400CA
Zone 2

AIR FILTER ELEMENTS

The air filters should be inspected and maintained daily.

Dust collector boxes should be cleaned daily; this will become more frequent in dusty operating conditions. Dust collector boxes must not be allowed to become more than half full.

It is recommended that air filter elements be replaced by new Ingersoll-Rand elements. However, if new elements are not at hand, the blocked elements may be cleaned and reused. For cleaning, the following instructions must be adhered to:

NEVER REMOVE AND REPLACE ELEMENTS WHEN COMPRESSOR IS RUNNING

REMOVAL AND CLEANING

1. Clean exterior of filter housing.
 2. Remove end cap and empty dust collector box.
 3. Unscrew hexagon nut main element to housing.
 4. Remove element.
 5. Clean inside housing.
 6. Clean element by directing a jet of dry compressed air at no more than 5 bar (73 p.s.i.) at an angle of 45 deg. to the outside of element. Carefully blow any dust from each fold of the element.
- NEVER USE COMPRESSED AIR TO BLOW THROUGH THE ELEMENT MEDIA.**

7. Mark the number of services to the main element on the end of the safety element, which should be replaced at least every five (5) services of the main element.

8. Elements must not be cleaned and re-used.

LUFTFILTRE.

Luftfiltre bør kontrolleres dagligt og eventuelt skiftes. Støvfilterets bokse bør renses dagligt. Det kan være nødvendigt at rense dem oftere. De må aldrig blive mere end halvt fyldte.

Det må anbefales, at der altid bruges originale INGERSOLL-RAND luftfiltre. Hvis der ikke er nye filtre til rådighed, kan de gamle renses med stor forsigtighed og bruges indtil nye kan skaffes frem.

Ved rensning skal følgende instruktioner følges: Udskift eller fjern aldrig filtrene imedens maskinen er i drift.

Udskiftning og rensning:

1. Rens omkring filterhuset.
2. Fjern endedækslet og tøm støvboksen.
3. Afmonter skruen der holder filtret.
4. Fjern filtret
5. Rens Filterhuset
6. Rens filtret ved hjælp af trykluft (max 5 bar – 73 psi) og hold luftpistolen i en vinkel af 45° på filtrets yderside. Blæs forsigtigt langs hver fold på elementet. **BLÆS ALDRIG MED TRYKLUF TIGENNEM MIDTEN AF FILTRET.**
7. Marker på enden hver gang filtret renses. Filtret skal skiftes for hver 5 rensning
8. Elementet må ikke renses eller genbruges

INSPECTION

1. Check for cracks, holes or any other damage to the element by holding it up against a light or by passing a lamp inside.
2. Check the seal at the end of the cartridge and replace if any sign of damage is evident.
3. Renew safety element if inspection reveals damage to main element.

REPLACEMENT

1. Assemble the new or cleaned elements into the filter housing.
2. Ensure that the seal seats properly on the bottom of the housing.
3. Secure the element in housing by hand tightening the hexagon nut.
4. Assemble the dust collector box parts ensuring they are correctly positioned with the lug interlocked with the slot in the cover rim.
5. Ensure that the arrow and 'top' marking on the collector box is correctly positioned.
6. Reset restriction indicator by depressing rubber diaphragm.
7. Before starting machine, check all clamps are tight.

AIR STARTER MOTOR

Normally the motor requires no maintenance except for topping up of the lubricator reservoir. But should the motor need to be removed for repairs, the following points should be noted;

1. When disassembling, always mark adjacent parts on the motor housing cover, cylinder housing gear case and drive housing so that these items can be located in the same position when the motor is re-assembled.
2. Do not disassemble the motor any further than necessary to replace a worn or damaged part.

INSPICER

1. Kontroller for revner, huller eller andre skader på elementet ved at holde det op mod lys eller ved at føre en lampe igennem elementet.
2. Kontroller tætningen for enden af elementet og udskift, hvis der er antydning af skade.
3. Udskift sikkerhedselementet, hvis inspektionen viser blot den mindste skade på hovedelementet.

UDSKIFTNING

1. Monter det nye eller rensede element i filterhuset.
2. Vær sikker på at tætningen i bunden af filterhuset sidder, som den skal.
3. Monteringen af elementet i filterhuset sikres ved at spænde møtrikken.
4. Saml støvsamler boksen og kontroller, at den er korrekt monteret.
5. Kontroller at pilen og topmakeringen på opsamlingsboksen sidder korrekt.
6. Reset indikatoren ved at trykke på gummimembranen.
7. Før start, kontroller at alle spændebånd er spændt.

LUFT STARTERMOTOR

Normalt kræver denne motor ingen vedligeholdelse ud over at fylde olie på oliebeholderen. Hvis motoren skal afmonteres for reparation, skal følgende punkter overholdes.

1. Ved demontering, mærk altid positionen på motordækslet. Cylinderhuset, gearmotoren og drivaggregatets hus, således at de enkelte dele kan monteres på nøjagtig samme positioner.
2. Demonter ikke flere dele end nødvendigt ved udskiftning af defekte dele.

4.8

MAINTENANCE

VEDLIGEHOLDELSE

HP400CA
Zone 2

3. Do not remove any part which is a press fit in or on a sub-assembly unless the removal of that part is necessary for replacement or repairs.

4. Always have a complete set of vanes, seals and O-rings on hand before commencing any overhaul of a starter.

Never re-use old seals or O-Rings.

TESTING THE STARTER MOTOR

1. Turn the Drive Pinion by hand in the direction of starter rotation. The clutch should ratchet smoothly with a slight 'clicking' action

NOTE: Proper Starter rotation is indicated when facing the Drive Pinion. That is, a Starter having the letter "R" in the model number is designated as a right-hand rotation model, and the Drive Pinion will rotate clockwise when facing the Drive Pinion.

2. Turn the Drive Pinion in the opposite direction of the Starter rotation. The gearing and motor should rotate freely with no binding.

3. Attach an air hose to the "IN" port on the Drive Housing, and apply 50 psig (3.4 bar/345 kPa) air pressure. The Drive Pinion should remove outward and air should escape from the "OUT" port.

3. Demonter ikke dele der er presset sammen, medmindre det er absolut nødvendigt for at udskifte defekte dele, eller for reparation.

4. Hav altid et komplet reparations sæt til rådighed før påbegyndelse af enhver reparation på starteren.

Genbrug aldrig tætnings- og O-ringe.

TEST AF STARTERMOTOR

1. Drej starterdrevet i startretningen med hånden. Drevet skal gå i indgrebet og uden stop.

Bemærk! Rigtig retning af starterdrevet er mærket på starteren med et "R". Hvilket betyder, at den skal dreje med uret.

2. Drej starteren i modsat retning af normal rotation. Starteren skal dreje glat og uden stramninger.

3. Monter luftslangen til koblingen mærket med "IN" på starterhuset og tilfør luft med et tryk på 50 psi (3,4 bar eller 345 KPa). Drevet vil nu presses ud og luften lukkes ud af afgangens mærket "OUT".

4. Plug the "OUT" port and apply 150 psig (10.3 bar/1034 KPa) air pressure to the "IN" port. Check to make certain no air is escaping. Measure the distance from the face of the Drive Pinion farthest from the mounting flange to the machined face of the mounting flange. It should be 2.75" (70.0 mm $\pm$ 1.5 mm). With the air pressure on and the Drive Shaft extended, push the Drive Pinion toward the Drive Housing until the Pinion rotates slightly and comes to a solid stop. While holding the Drive Pinion against the stop, measure again the distance from the face of the Drive Pinion to the machined face of the mounting flange. The difference between the two measurements must be 0.47" (12.0 mm $\pm$ 0.9 mm). Remove the pressure from the "IN" port and measure again the distance from the face of the Drive Pinion to the machined face of the mounting flange. It should be 1.82" (46.2 mm $\pm$ 1.5 mm).

5. Attach a $\frac{3}{8}$ " (9 mm) air hose to the inlet of the motor and apply 90 psig (6.2 bar/620 KPa) air pressure. The Starter motor should run smoothly.

6. Plug the exhaust port and apply 30 psig (2.1 bar/207 KPa) air pressure to the inlet of the motor. Immerse the Starter for thirty seconds in a non-flammable solvent. If the Starter is properly sealed, no bubbles will appear.

RADIATOR AND OIL COOLER

Each month it is recommended that the radiator be cleaned. When grease, oil and dirt accumulate on the cooling faces, the efficiency of the radiator becomes impaired.

HOSES

At regular intervals, inspect all of the intake lines to and from the air cleaners, and all flexible hoses used for air lines, oil lines and fuel lines.

4. Bloker "OUT" udgangen og tilfør 150 psig (10,3 bar eller 1034 KPa) lufttryk igennem koblingen mærket "IN". Kontroller for utætheder. Mål afstanden fra kanten af starterdrevet til monteringsflangen. Der bør være 2,75" (70,0 mm $\pm$ 1,5 mm) ved lufttryk på og med starterdrevet ude fra huset, indtil drevet roterer roligt og det stopper. Imedens drevet holdes mod stop måles igen afstanden, forskellen mellem de to målinger, som må være 0,47" (12,0 mm $\pm$ 0,9 mm). Fjern lufttrykket og udmål endnu en gang afstanden. Den skal nu være 1.82" (46,2 mm $\pm$ 1,5 mm).

5. Monter en $\frac{3}{8}$ " (9 mm) luftslange til indgangssiden af motoren med et lufttryk på 90 psig (6,2 bar eller 620 KPa). Startmotoren skal da dreje let.

6. Luk afgangshullet og sæt indgangstrykket til 30 psig (2,1 bar eller 207 KPa) Dyp starteren i en ikke brændbar væske. Hvis starteren er tæt, vil der ikke vise sig nogle luftbobler.

LUFT- OG OLIEKØLER

Disse bør renses hver måned. Når fedt, olie og støv sætter sig i kølerne, bliver disses virkningsgrad væsentligt forringet. For at rense kølerne blæses en ikke brændbar renservæske gennem disse.

SLANGER

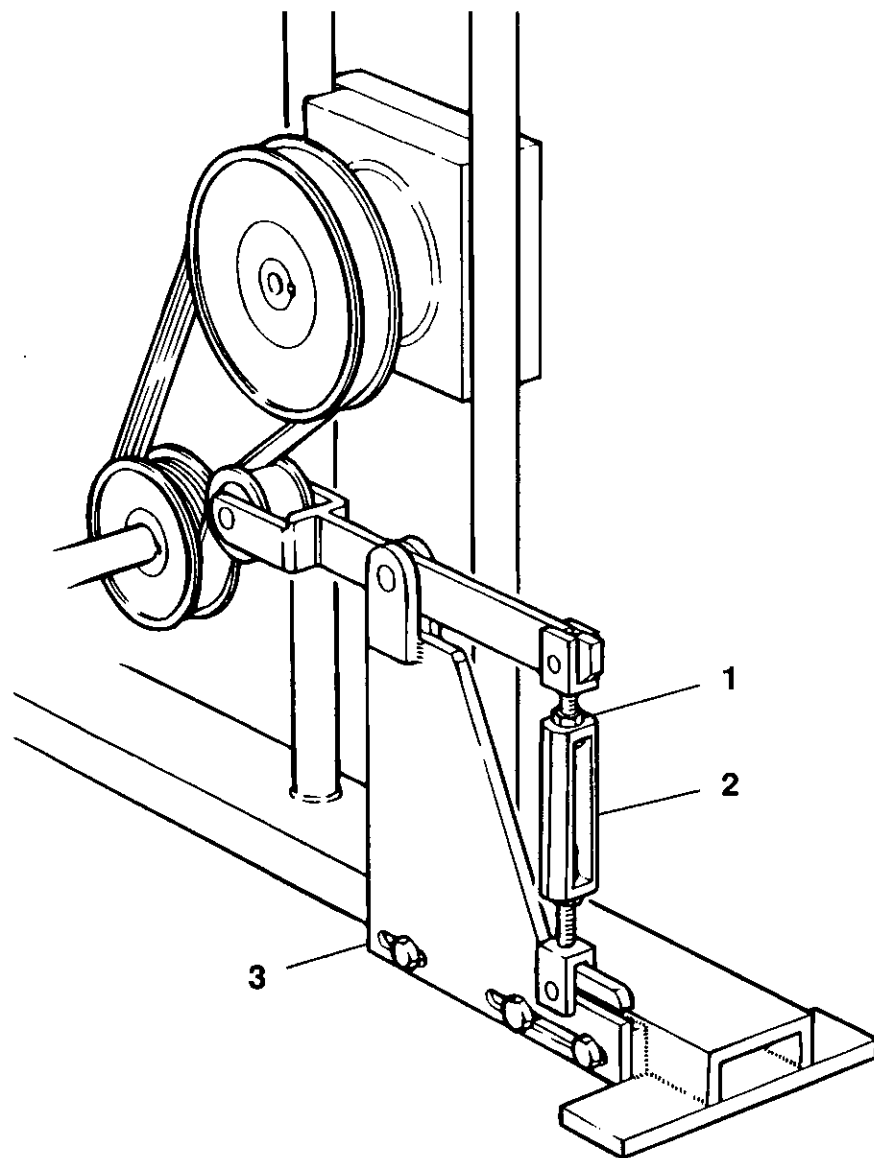
Kontroller med jævne mellemrum alle indsugningsrør og flexible slanger for utætheder. 0) Både brændstof- og luftslanger.

4.10

MAINTENANCE

VEDLIGEHOELDELSE

HP400 CA
Zone 2



T1714
Revision 00
06/92

FAN BELT TENSIONING

The cooling fan is driven from the compressor male rotor by a poly-vee drive belt.

It is important that this belt is correctly tensioned to prevent it from slipping. To adjust the tension of the belt, the following instructions must be adhered to:

A. Release turnbuckle locknut (1) and slacken turnbuckle body (2).

B. Slacken the screws securing support plate (3).

C. Ensure support plate (3) is pushed fully forward towards the pulley.

D. Tighten screws to secure support plate (3).

E. Hand tighten turnbuckle body (2) and run machine. *Correct belt tension is when no slippage occurs on change of speed.*

F. If belt squeals on change of speed or stopping of machine, increase the belt tension.

G. When correct tension is achieved, tighten turnbuckle locknuts (1).

Periodically check the tightness of all fan mounting bolts and drive parts. the fan mounting nut should be tightened to a torque value of 260 Lb.Ft/80 Nm.

N.B. Fan drive belt must be replaced after 500 hours to maintain anti-static properties

VENTILATORREMMENS TILSPÆNDING

Ventilatorvingen er drevet af en tandrem over hanroturen.

Det er vigtigt, at remmen er korrekt spændt for at forhindre, at den skrider i remskiven.

For at spænde remmen korrekt, skal følgende punkter overholdes:

A. Skru remstrammerens låsemøtrik løs og slæk remmen (2)

B. Løsen støttepladen (3)

C. Vær sikker på at støttepladen er skubbet helt frem mod remskiven.

D. Spænd skruerne for at sikre pladen (3)

E. Håndspænd remstrammeren (2) og drej maskinen. *Remmen er korrekt spændt, når den ikke skrider ved skift af hastighed.*

F. Hvis remmen skrider ved hastighedsskift eller ved stop, gentag opstramningen af remmen.

G. Når korrekt spænding er opnået, efterspænd boltene i støttepladen.

Kontroller periodisk remmen og boltene tilspænd. Bolte skal være spændt med en tilspænding på 260 Lb./80 Nm.

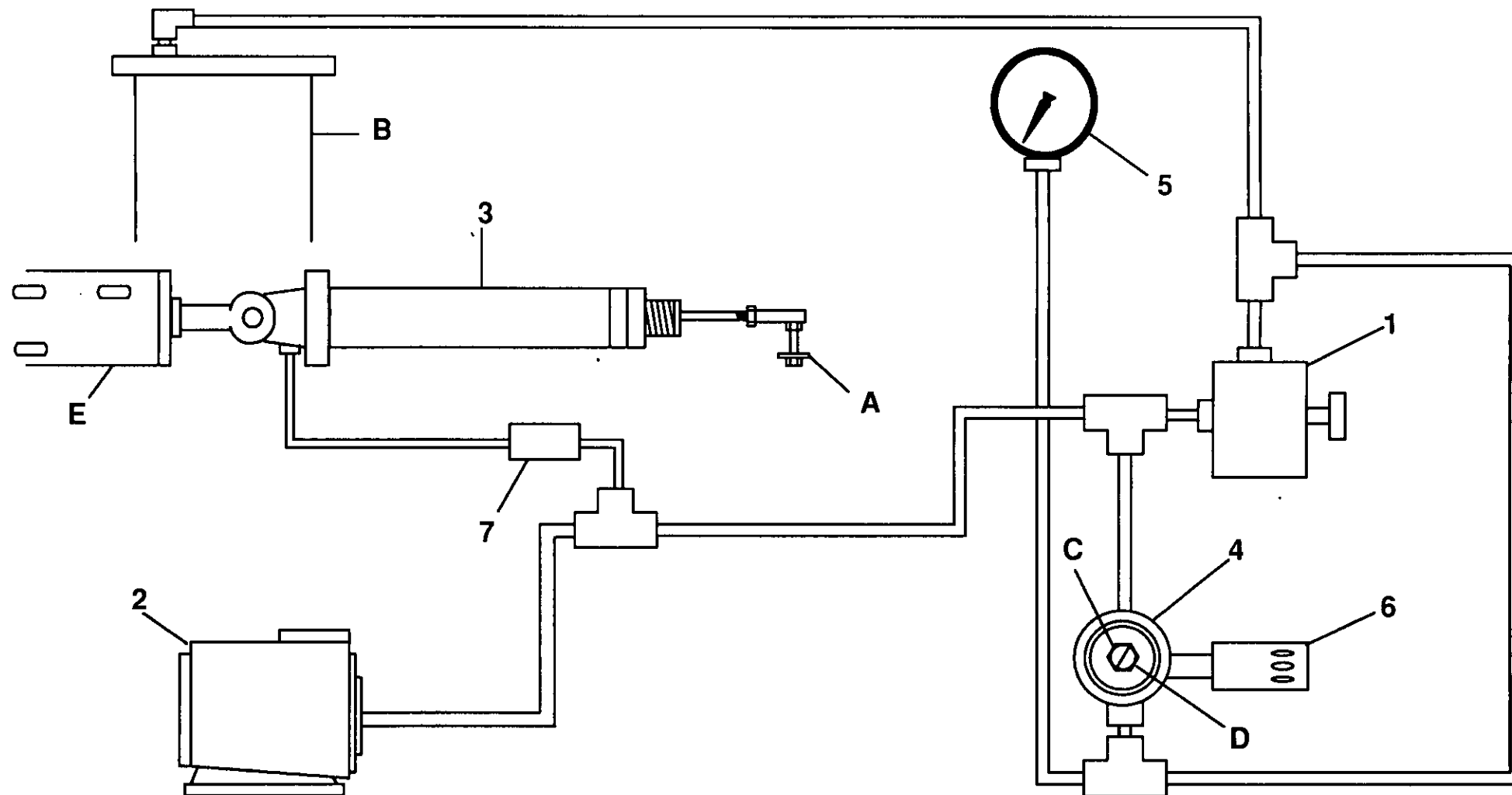
NB! Ventilatorremmen skal udskiftes efter 500 timers drift for at bevare den antistatiske evne.

5.0

SPEED & PRESSURE
REGULATOR ADJUSTING
INSTRUCTIONS

JUSTERING AF
HASTIGHED
OG TRYK

HP400CA
Zone 2



A Engine Throttle Arm

B Separator Tank

C Locknut

D Adjusting Screw

E Air Cylinder Bracket

1 Start–Run Valve

2 Unloader

3 Air Cylinder

4 Regulator

5 Discharge Air Pressure
Gauge

6 Silencer/Orifice

7 Flow regulator

A Motor justerings arm

B Separator tank

C Låsemøtrik

D Justerings skrue

E Luftcylinder holder

1 2–Vej start/kør ventil

2 Indsugnings aflast ventil

3 Luftcylinder
(hastighedsregulator)

4 Tryk regulator

5 Afgangstryk manometer

6 Lyddæmper

7 Regulator

5.2

SPEED & PRESSURE REGULATING INSTRUCTIONS

JUSTERING AF HASTIGHED OG TRYK

HP400CA
Zone 2

Normally regulation requires no adjusting, but if correct adjustment is lost, proceed as follows.

Before Starting Engine

1. Inspect Engine Throttle Arm 'A' on engine governor to see that it is resting against Full Speed Stop.

2. Loosen Locknut 'C' and turn Adjusting Screw 'D' anti-clockwise until no tension is felt on screw. Now turn screw one full turn clockwise.

AFTER STARTING ENGINE

3. Allow unit to warm up then press Start-Run Valve '1'.

4. Open and adjust service valve on outside of machine to maintain normal operating pressure at discharge pressure gauge.

5. Ensuring that pressure is maintained at 100psi (6.9 bar), turn Adjusting Screw 'D' until Engine Throttle Arm 'A' just lifts off Full Speed Stop.

NOTE: Turning Adjusting Screw 'D' clockwise will raise full speed pressure.

6. Close service valve, engine will slow to idle speed. Loosen locknut on Air Cylinder '3' and rotate to adjust idle speed to 1200 rpm. Repeat steps 5-6 if required.

Normalt kræver disse ingen justering, men hvis de er ude af justering skal følgende procedure følges.

FØR OPSTART

1. Kontroller armen for indsugningsspjældet 'A' på motor reguleringen for at kontrollere, at den hviler mod speed stoppet.

2. Løsen låsemøtrikken 'C' på justerskruen 'D', og drej mod uret indtil, der ikke er nogen modstand. Derefter drejes juster skruen en hel omgang med uret.

EFTER OPSTART

3. Lad enheden varme op og tryk så på start/run ventilen '1'.

4. Åben og juster serviceventilen på ydersiden af maskinen for at få korrekt afgangstryk (aflæses på manometer).

5. Kontroller at afgangstrykket er som ønsket. Juster regulator skruen 'D' indtil spjæld armen 'A' lige løfter stoppet.

BEMÆRK! Ved justering af regulatorskruen 'D' med uret, opnås fuld speed.

6. Luk serviceventilen. Løsen låsemøtrikken '3'. Motoren vil nu gå ned i omdrejninger til 1200 RPM. Gentag punkt 5-6, hvis det er nødvendigt.



USE ONLY GENUINE INGERSOLL-RAND PARTS

BENYT KUN ORIGINALE INGERSOLL-RAND RESERVEDELE

ANVÄND ENDAST INGERSOLL-RAND ORIGINALDELAR

BENYTT KUN ORIGINALE INGERSOLL-RAND RESERVEDELER

6.0

FAULT FINDING – COMPRESSOR

FEJLFINDING – KOMPRESSOR

HP400CA
Zone 2

Engine will not crank
Motor vil ikke dreje

- a) Insufficient pressure in air start tank.
- b) Relay Valve seized.
- c) Yellow alert not connected or faulty.

- a) Ikke tilstrækkeligt lufttryk til rådighed
- b) Ventil blokeret
- c) Gul startalarm ikke tilsluttet eller tilsluttet forkert.

Engine will not start
Motor vil ikke starte

- a) Low fuel level.
- b) Fuel system water trap full of water. Drain off water and press button on top to return float.
- c) Reset on. Overspeed and vibration valves not pressed.
- d) Fuel valve not reset. Turn clockwise to start position.
- e) Normal stop button not pulled out or fuel pump lever stuck in stop position.
- f) Air entrapped in fuel system.

- a) Ingen brændstof
- b) Vand i brændstofdræn. Tap vandet af og tryk på topknappen for retur flow.
- c) Reset på overspeed og vibrationsventil ikke inde.
- d) Brændstof ventil ikke resat, drej med uret til start position.
- e) Normal stopknappen trykket ind eller brændstofpumpens arm låst i stopposition.
- f) Luft i brændstofsystem.

Engine will not continue to run after pressing 'reset' button
Motoren vil ikke køre efter tryk på reset knap

- a) Safety system reset button not pressed for long enough to allow air pressure to build up. Watch safety system pressure gauge rising before releasing button.
- b) Air leak in safety system. See pneumatic diagram.
- c) Fault on machine indicated by Tell-Tales or faulty safety system valves.

- a) Sikkerhedssystemets reset knap ikke trykket ind længe nok til at tillade opbygning af tryk. Sikkerhedsmanometeret viser opbygget tryk før udløsning af trykknap.
- b) Lækage i sikkerhedssystemet. Se pneumatisk diagram.
- c) Fejl på maskinen indikeret ved advarsels faner eller defekte ventiler i sikkerhedssystemet.

Unit shuts down prematurely
Hurtig maskin shut down

- a) Fault on machine indicated by Tell-Tales.
- b) Loss of air in safety system – check for leaks.
- c) Fuel starvation. Check water trap in fuel system. Check fuel level.

- a) Fejl på maskinen – indikeres af advarselsfaner.
- b) Tab af luft i sikkerhedssystemet – kontroller for utætheder.
- c) Brændstofmangel – kontroller vandudskiller, kontroller brændstofniveau.

Excessive Vibration Kraftige vibrationer	a) Engine idle speed too low. Should be 1000/1100 r.p.m. b) Mechanical fault, e.g. broken fan or coupling.	a) Motorens tomgang for lav, skal være 1000–1100 RPM. b) Mekanisk fejl. F.eks. knækket ventilatorrem eller kobling.
Engine Stalls on Idle Motor stopper i tomgang	a) Idle speed too low. b) Unloader not closing properly.	a) For lav tomgang. b) Aflastningsventillukker ikke.
Air Discharge Capacity Too Low Afgangsluft for lavt	a) Engine speed too low. Maximum 2100 r.p.m. b) Blocked air cleaner. Check gauge. c) High pressure air escaping.	a) Motoromdrejninger for lave. Skal være 2100 RPM b) Blokeret luftfilter. c) Utæt luftsystem.
Excessive Oil Carry Over in Discharge Air Olie i afgangsluft	a) Blocked scavenge line. Check scavenge line and orifice. b) Punctured separator element.	a) Blokeret scavenge line, kontroller rør og åbning. b) Defekt separatorelement.
Safety Valve Blows Sikkerhedsventilen	a) Operating pressure too high. b) Regulator out of adjustment. c) Faulty regulator valve.	a) Afgangstryk for højt. b) Regulering ude af justering. c) Defekt regulatorventil.
Engine Speed Too Low Motorhastighed for lav	a) Incorrect setting of throttle arm. b) Blocked fuel filter. c) Faulty regulator valve. d) Blocked silencer on regulator valve.	a) Forkert indstilling af justerarm. b) Blokeret brændstoffilter. c) Defekt regulatorventil. d) Blokeret udstødning på regulatorventil. c) Utæt luftsystem.

FAULT	PROBABLE CAUSE	SOLUTION
Loss of power	Worn motor parts	Remove the motor from the Motor Housing and disassemble the motor. Examine all parts and replace any that are worn or damaged. Use the following guidelines for determining unserviceable parts: 1. Vanes – Install a set of new vanes if any vane is cracked, spalled or worn to the extent that it's width is 0.67" (17 mm) or less at either end. 2. Rotor Bearings – Replace if any roughness or looseness is apparent. 3. Rotor – Replace if the body has deep scoring that cannot be removed by polishing with emery cloth. 4. Cylinder Housing – Replace if there are any cracks or deep scoring. 5. End Plates – Clean up scoring by rubbing it with emery cloth placed on a flat surface.
	Inadequate Lubrication	Check the lubricator, inlet hose, fitting and oil supply hose to make sure they are vacuum tight and free of leaks. Tighten all joints and replace the lubricator if necessary.
Air or Gas leakage	Worn 'O' rings	Check the End Plate O-rings and Drive Housing O-ring plug the exhaust. Apply 30 psig (2.1 bar/207 KPa) air to the inlet and immerse the unit for 30 seconds in nonflammable solvent. If bubbles appear, replace the O-ring, Gaskets or seals.
Pinion does not engage the flywheel	Broken clutch jaws or other broken parts	Disassembly of the Piston and Clutch
Motor runs, pinion engages but does not rotate	Broken shafting, Gearing or Clutch Jaws	Disassembly of the Piston and Clutch
Excessive butt engagement	Dry helical spline	Disassembly of the Piston and Clutch. Lubricate the helical spline with Ingersoll-Rand Grease No.28.

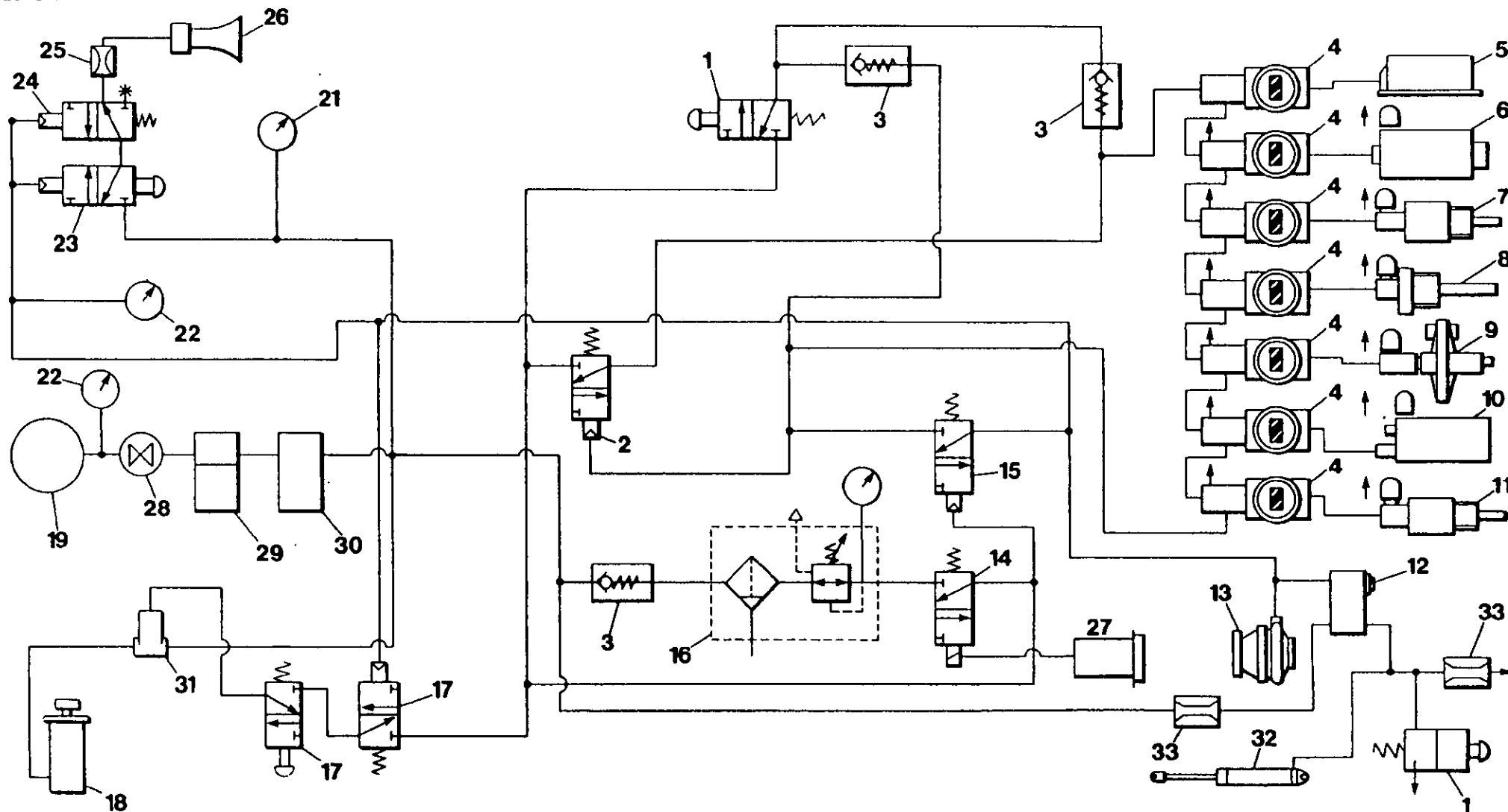
PROBLEM	MULIG GRUND	LØSNING
Tab af kraft	Slidte motor dele	Fjern motoren fra huset og adskild motoren. Kontroller alle dele og udskift slidte eller beskadigede dele. Brug følgende ledetråde for alle dele, der ikke kan repareres. 1. Tanddrev – Monter nyt hvis de er defekte eller hvis det er slidt til mindre end 0,67" (17 mm) 2. Lejer – Skift hvis der er mislyde/mærker i lejebanerne. 3. Rotor – Skift hvis der er mærker som ikke kan poleres væk. 4. Cylinder hus – Skift hvis der er revner eller mærker. 5. Endeplader – Renslib på slibeplan. Kontroller smøring, indsugningsslange, fittings og olieslange. Kontroller for utætheder. Efterspænd og udskift olie om nødvendigt.
Luft eller gas lækage	Defekte O-ringe	Kontroller endepladernes, starterhusets og udstødningens o-ringe. Kontroller for utætheder i ikke brændbar væske ved et tryk på 30 psig (2,1 bar – 207 KPa)
Starterdrevet går ikke i indgreb	Defekte tænder på drev eller kobling	Demonter stempel og kobling.
Motoren drejer, drevet går i indgreb, men turner ikke motoren	Knækket aksel, gear eller tænder på drev	Demonter stempel og kobling.
Starter drev klemmer	Manglende smøring på drevets aksel	Demonter stemper og kobling. Smør aksel og notgang.

6.4

FAULT FINDING

FEJLFINDING

HP400 CA
Zone 2



T1628
Revision 00
06/92

HP400CA
Zone 2

Item	Description	Beskrivelse
1	Safety System Reset Button	Sikkerhedssystemets reset knap
2	Safety System Energising Relay	Sikkerhedssystemets tilslutningsrelæ
3	Check Valve	Kontrolventil
4	Tell-Tale Indicator Relays	Advarsels indikator
5	Engine Vibration Sensor	Vibrationsmåler
6	Engine Overspeed Sensor	Overspeed måler
7	Engine Water Temperature Sensor	Vandtemperatur måler
8	Engine Exhaust Temperature Sensor	Udstødningstemperatur måler
9	Engine Water Loss Sensor	Kølevandstemperatur måler
10	Engine Oil Pressure Sensor	Olietryks måler
11	Compressor Discharge Temperature Sensor	Luftafgangs temperatur måler
12	Fuel Shutoff Valve	Brændstof lukkeventil
13	Air Intake Shut-off Valve	Indsugningsluft lukkeventil
14	'Yellow Alert' Solenoid Valve	"Gul alarm" magnetventil
15	'Yellow Alert' Shutdown Relay	"Gul Alarm" shut down ventil
16	Filter Regulator	Filter regulator
17	Starter Inhibitor Relay	Start begrænsningsrelæ
18	Starter Motor	Start motor
19	Start System Air Reservoir	Start systemets lufttank
20	Start Button	Start knap
21	Start System Pressure Gauge	Start systemets trykmanometer
22	Safety System Pressure Gauge	Sikkerhedssystemets tryk manometer
23	Horn Isolate Button	Trykknap for advarselshorn
24	Horn Relay	Relæ for advarselshorn
25	Orifice (1 mm)	Åbning (1 mm)
26	Horn	Horn
27	'Yellow Alert' Electrical Socket	"Gul alarm" elektrisk sokkel
28	Ball Valve	Kugleventil
29	Filter	Filter
30	Lubricator	Smøremiddel
31	Relay Valve	Relæ ventil
32	Cylinder	Cylinder
33	Orifice	Åbning

Revision 01
06/92

6.5

FAULT FINDING

FEJLFINDING

6.6

TORQUE SETTING CHART

TILSPÆNDINGS MOMENT

HP400CA
Zone 2

lb ft.	Nm	FASTENING	FASTSPÆNDING
340	500	Drive Pins to Flywheel	Spændebolte til svinghjul
340	500	Element to Airend Hub	Kobling til luftendehus
18	24	Drive Ring to Flywheel	Drivring på svinghjul
20	27	Airend to Engine	Luftende til motor
140	190	Rear Mounting Brackets to Engine	Bageste motor ophæng
140	190	Mounting Bracket to Airend	
140	190	Resilient Mounts to Frame	Gummiophæng til ramme
20	27	Cylinder Bracket to Engine	Cylinderbeslag til motor
20	27	Engine Exhaust Manifold Connector	Motor udstødnings- manifold forbindelse
35	47	Autella Clamps	Spændband
140	190	Unloader Valve to Airend	Aflastningsventil til luftende
63	85	Oil Manifold to Airend	Olie manifold til luftende
260	352	Lifting Bail to Truck Frame	Løfteøje til ramme
140	190	Cover to Separator Tank	Dæksel til seperator tank
63	85	Separator Tank to Truck Frame	Seperatortank til ramme
63	85	Fan to Fan Hub	Ventilator til ventilatorhus
260	352	Nut on Fan Shaft	Møtrik til ventilatoraksel
35	47	Taper Lock Bushes	Lukke bøsninger
140	190	Discharge Pipe to Airend	Afgangsrør til luftende
63	85	Discharge Pipe to Separator Tank	Afgangsrør til seperatortank
25	35	Exhaust Pipe to Turbo	Udstødningsrør til turbo
175	230	Exhaust Pipe to Engine & Cooler	Udstødningsrør til motor og køler

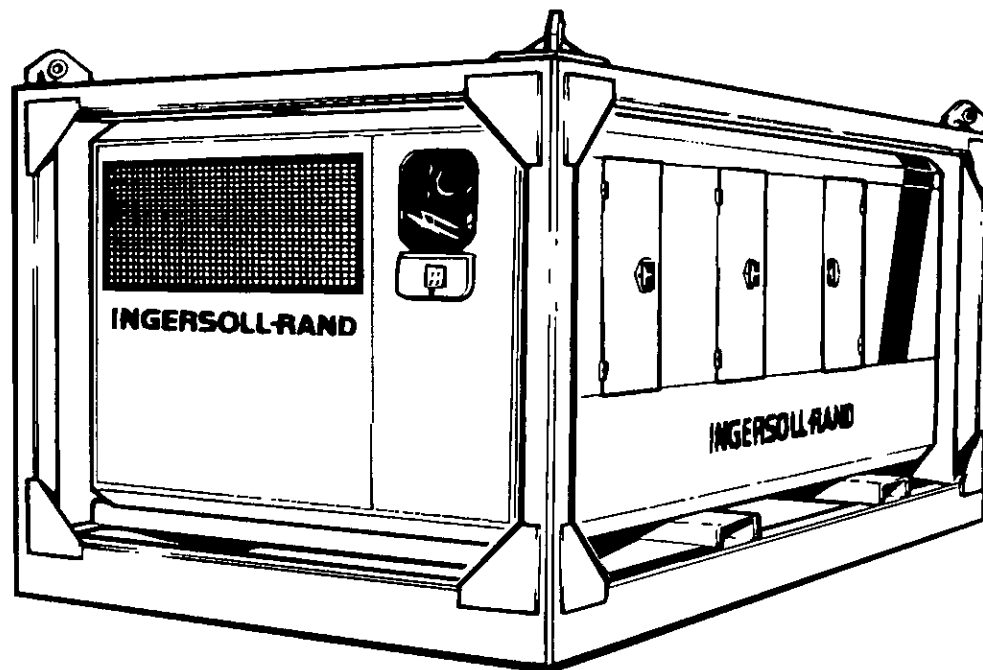
INGERSOLL-RAND

HP400 COMPRESSOR

PARTS CATALOGUE

RESERVEDELSKATALOG

CATERPILLAR ENGINE



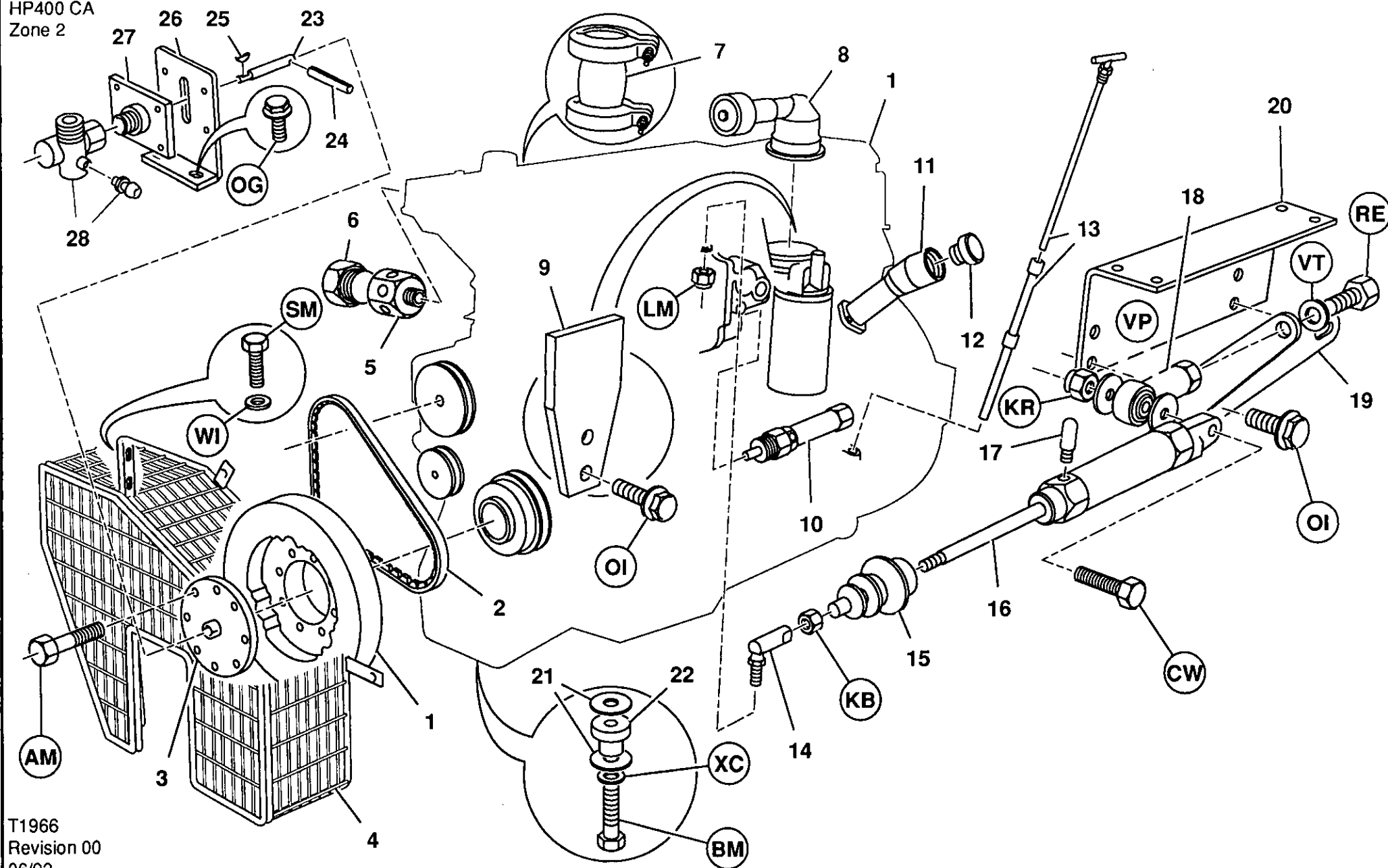
T1960

7.0.0

ENGINE ASSEMBLY

MOTOR MONTERINGSDELE

HP400 CA
Zone 2



T1966
Revision 00
06/92

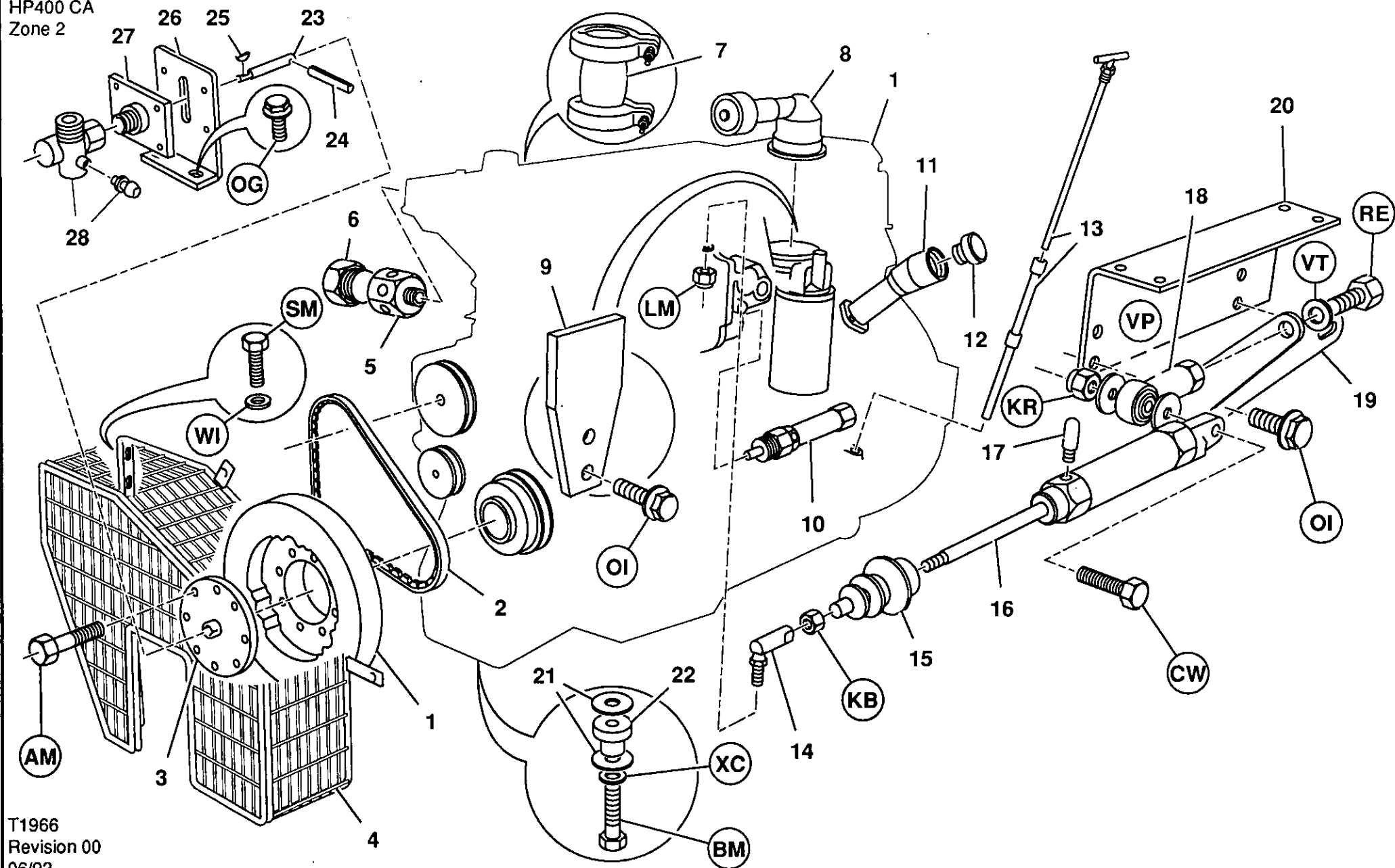
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92869734	1	Engine	Motor
	2	92887009	1	Belt, drive	Drivrem
	3	92908532	1	Plate	Plade
	4	92911577	1	Guard	Skærm
	5	92919968	1	Manifold	Manifold
	6	92919752	1	Plug	Prop
	7	92901263	1	Coupling	Kobling
	8	92870955	1	Flame trap assembly	Flammeskærm, monterings sæt
	9	92908862	1	Bracket	Beslag
	10	92895069	1	Cylinder, air	Cylinder, luft
	11	92870948	1	Pipe	Rør
	12	92910470	1	Plug	Prop
	13	92870930	1	Dipstick assembly	Oliemålepind, monterings sæt
	14	92090786	1	Ball-joint	Kugleled
	15	92677139	1	Cover, dust	Støvdæksel
Revision 01 06/92					
7.0.1 ENGINE ASSEMBLY MOTOR, MONTERINGSDELE					

7.0.2

ENGINE ASSEMBLY

MOTOR MONTERINGSDELE

HP400 CA
Zone 2



T1966
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	16	92866904	1	Cylinder, air	Cylinder, luft
	17	92549278	1	Silencer	Lyddæmper
	18	92867134	1	Rod end	Gevindstykke
	19	92866912	1	Bracket	Beslag
	20	92911668	1	Bracket	Beslag
	21	35101468	2	Washer, snubber	Tætningsskive
	22	35273812	1	Mount	Afstandsstykke
	23	92911189	1	Pin	Stift
	24	92911916	1	Pin	Stift
	25	92911734	1	Key	Not
	26	92908508	1	Bracket	Beslag
	27	92911965	1	Plate, adaptor	Plade for adaptor
	28	92899954	1	Housing, angle drive	Hus for vinkeldrev

Revision 01
06/92

7.0.3

ENGINE ASSEMBLY

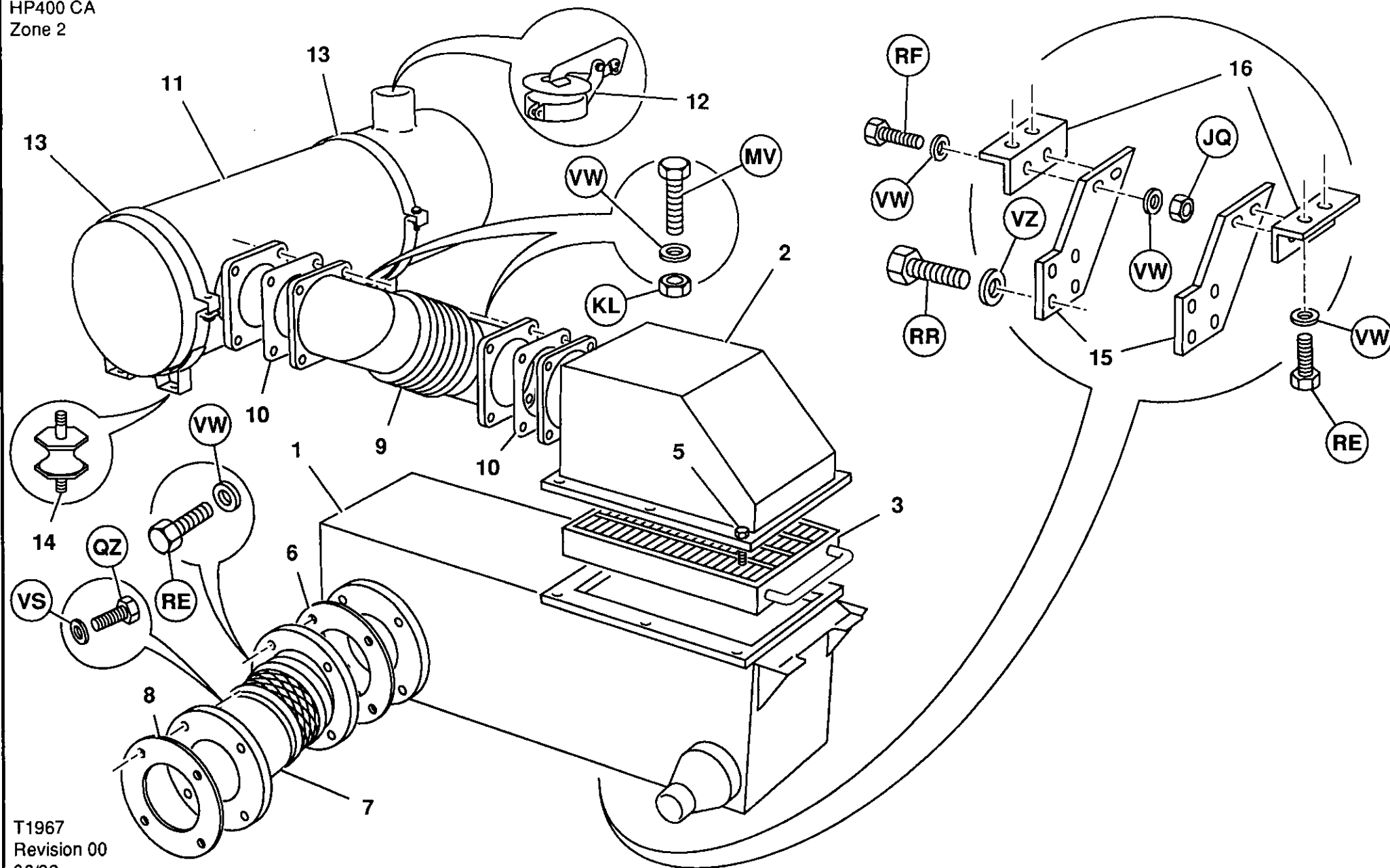
MOTOR,
MONTERINGSDELE

7.1.0

EXHAUST SYSTEM

UDSTØDNINGS- SYSTEM

HP400 CA
Zone 2



T1967
Revision 00
06/92

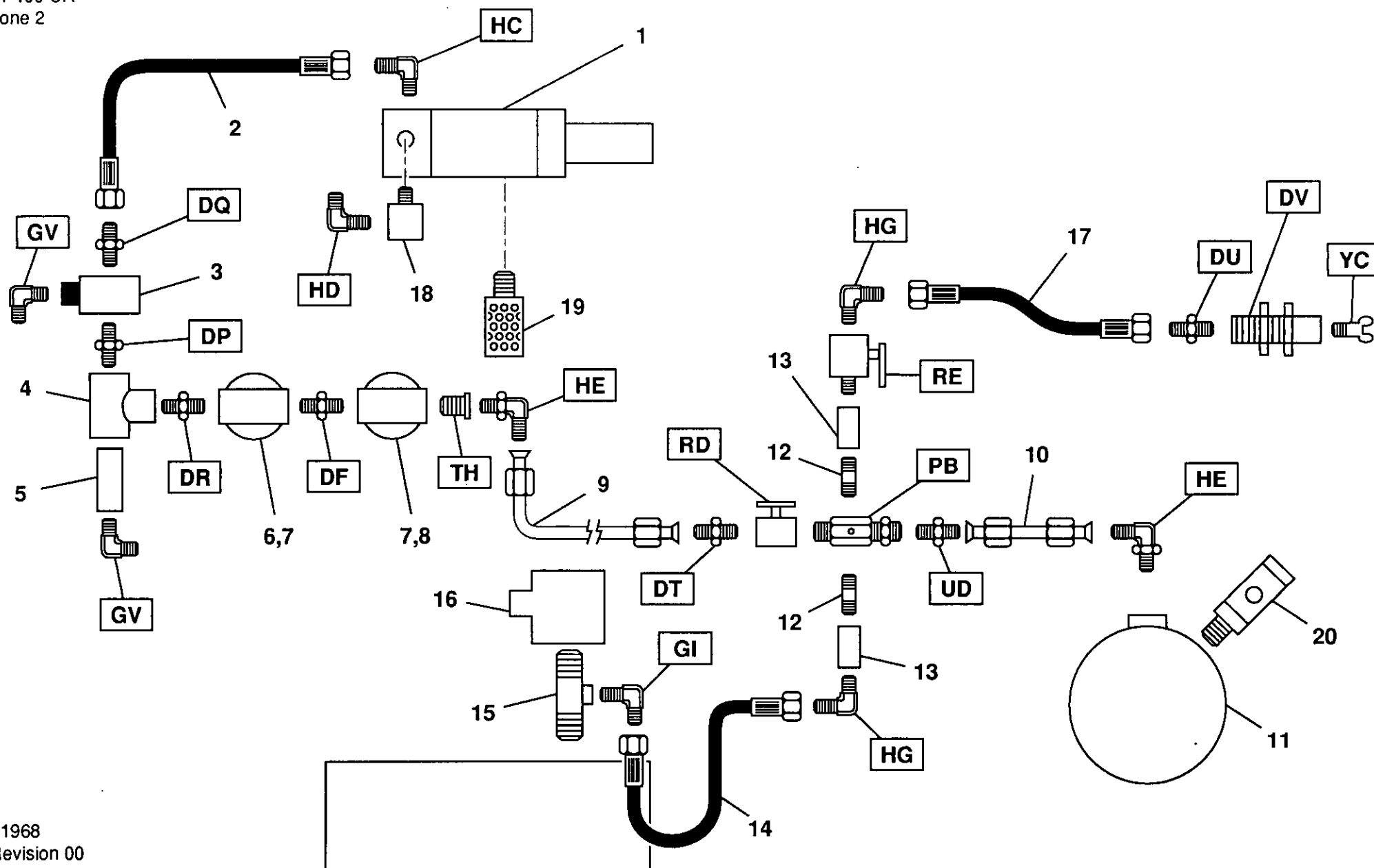
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92870880	1	Cooler, exhaust gas	Køler for udstødning
	2	92870898	1	Box	Kasse
	3	92546431	2	Arrestor, flame	Flammeskærm
	*4	92657030	1	Arrestor, dummy	Flammeskærm, dummy
	5	92924232	6	Bolt	Bolt
	6	92924224	1	Gasket	Pakning
	7	92870922	1	Pipe	Rør
	8	92924216	1	Gasket	Pakning
	9	92901115	1	Pipe	Rør
	10	92517846	2	Gasket	Pakning
	11	92901743	1	Arrestor, spark	Gnistfanger
	12	92777143	1	Raincap	Vanddæksel
	13	92899566	2	Clamp, band	Spændebånd
	14	92276096	4	Mount	Afstandsstykke
	15	92870914	2	Bracket	Beslag
	16	92870906	2	Bracket	Beslag
				* Not illustrated	* Ikke illustreret
Revision 01 06/92					
7.1.1		EXHAUST SYSTEM		UDSTØDNINGS- SYSTEM	

7.1.2

ENGINE AIR START SYSTEM - SCHEMATIC

LUFT STARTER MOTOR SYSTEM - SKEMATISK

HP400 CA
Zone 2



T1968
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	01242890	1	Motor	Motor
	2	92900901	1	Hose	Slange
	3	03719127	1	Valve, relay	Relæ ventil
	4	92356682	1	Tee	Tee
	5	92773316	1	Drain well	Dræn
	6	92708494	1	Lubricator	Smøreapparat
	7	92900935	1	Bracket	Beslag
	8	92708486	1	Filter	Filter
	9	92896141	1	Tube assembly	Rør
	10	92896133	1	Tube assembly	Rør
	11	92856558	1	Tank	Tank
	12	92886589	2	Nipple	Nippel
	13	92911411	2	Valve, check	Kontrolventil
	14	92354760	1	Hose assembly	Slange
	15	92906007	1	Nipple	Nippel
	16	92547819	1	Valve, minimum pressure	Trykventil minimum
	17	35287952	1	Hose assembly	Slange
	18	03810728	1	Lubricator	Smøreapparat
	19	03831864	1	Silencer	Lyddæmper
	20	92517010	1	Valve, safety	Sikkerheds ventil
Revision 01 06/92					

7.1.3

ENGINE AIRSTART
SYSTEM- SCHEMATIC

LUFT STARTER MOTOR
SYSTEM – SKEMATISK

BRÆNDSTOF SYSTEM - SKEMATISK

FUEL SYSTEM - SCHEMATIC



FUEL SYSTEM - SCHEMATIC

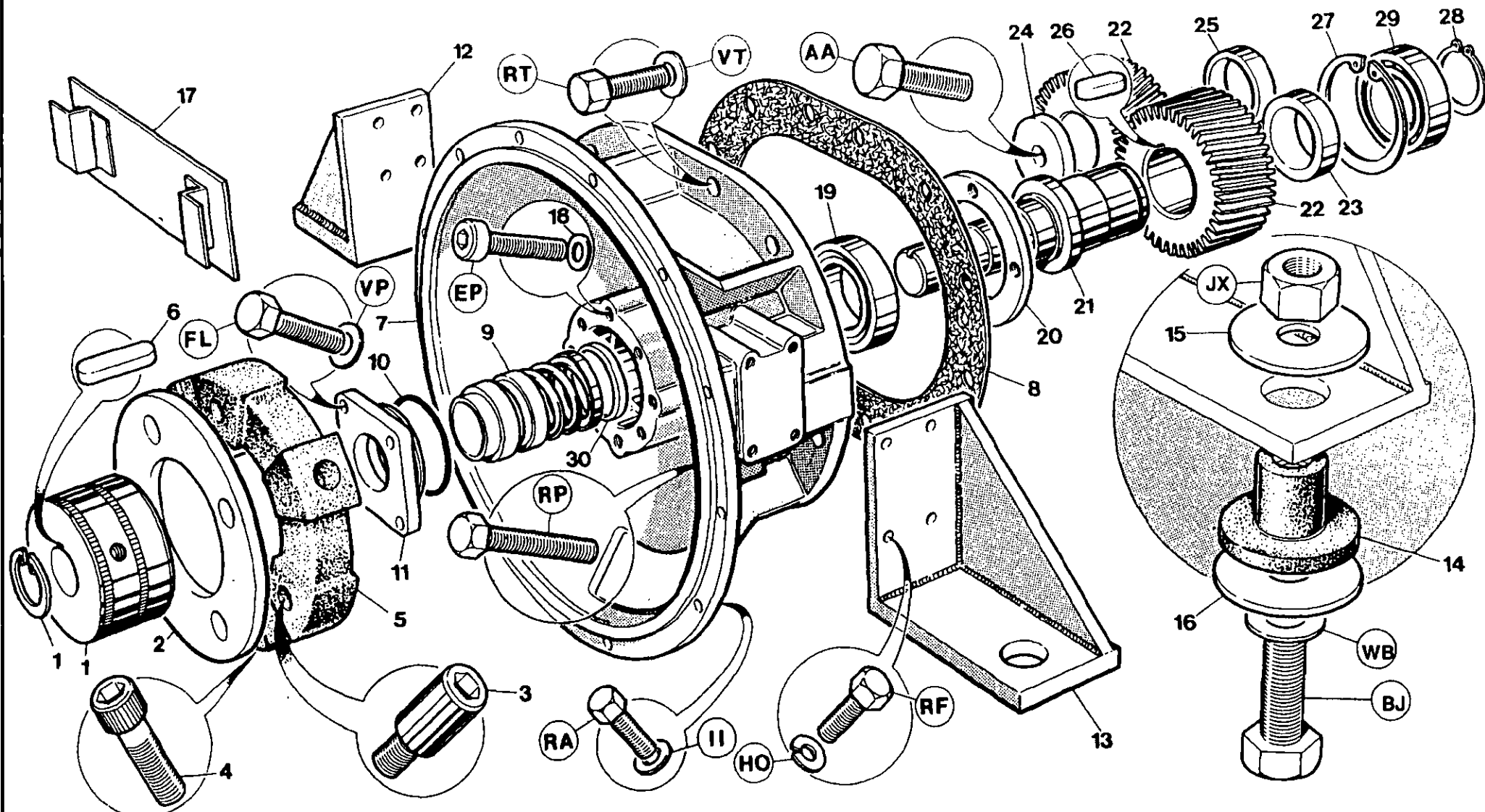
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92895275	1	Tank, fuel	Brændstoftank
	2	92909449	1	Hose assembly	Slange
	3	92822295	1	Pump	Pumpe
	4	92822980	1	Element	Element
	5	92822972	1	Seal	Tætning
	6	92909456	1	Hose assembly	Slange
	7	92892686	1	Trap, water	Vandudskillor
	8	92902154	1	Hose assembly	Slange
	9	92901875	1	Hose assembly	Slange
	10	92901883	1	Hose assembly	Slange
	11	92037464	2	Valve, drain	Dræn ventil
	12	92120013	1	Cap, fuel filler	Top, brændstoftank
	13	92043058	1	Filter, fuel	Brændstoffilter
	14	92898733	1	Gauge, fuel	Brændstofmåler
Revision 01 06/92 7.2.1 FUEL SYSTEM – SCHEMATIC BRÆNDSTOF SYSTEM – SKEMATISK					

7.3.0

AIREND ASSEMBLY

LUFTENDE

HP400 CA
Zone 2

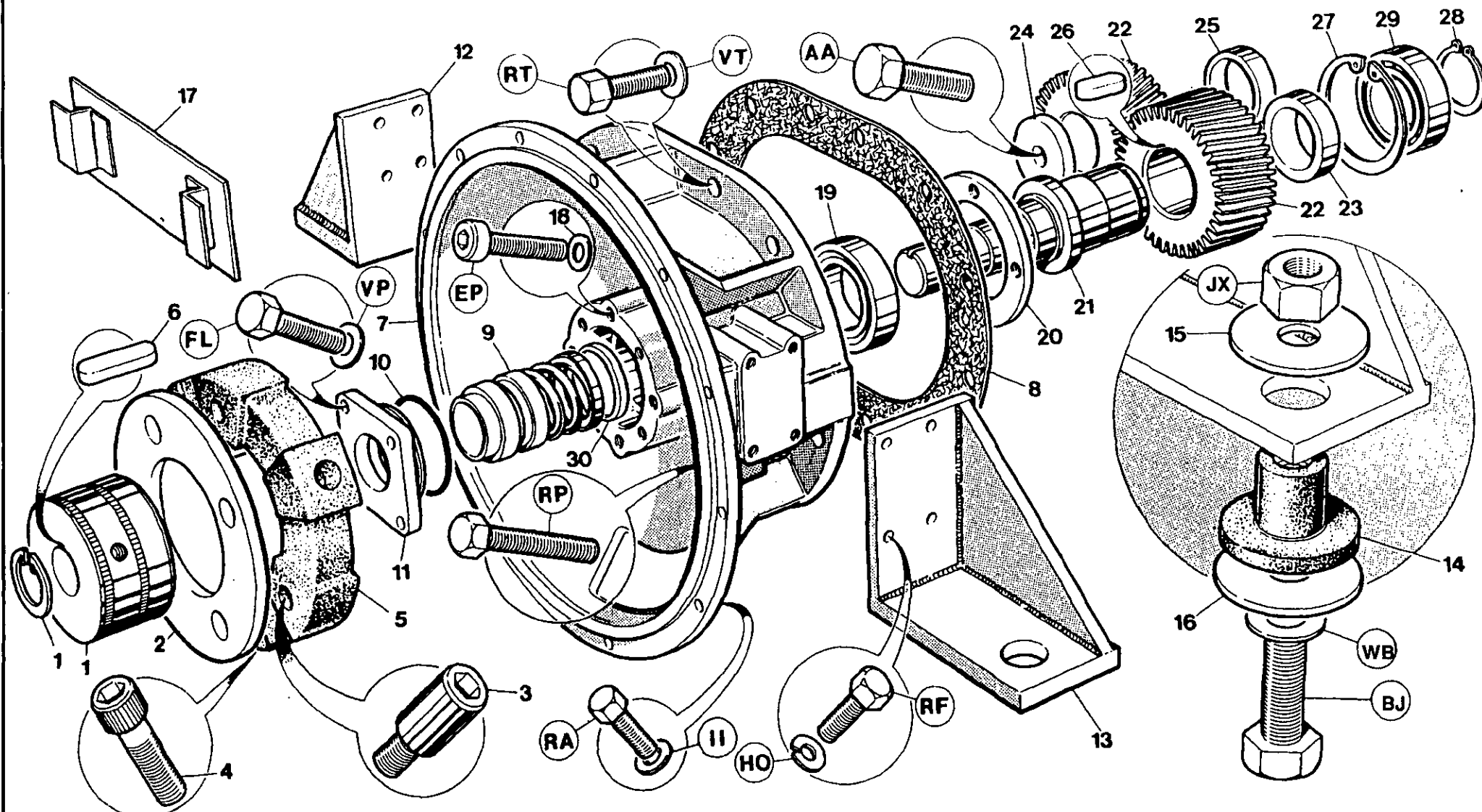


T1512
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1-5	92803113	1	Coupling assembly	Monterings sæt for kobling
	1	92821024	1	Hub & Circlip assembly	Nav & fjederskive sæt
	2	92821032	1	Plate	Plade
	3	92089341	4	Bolt	Bolt
	4	92398189	4	Screw, caphead	Unbrakoskrue
	5	92739077	1	Element	Element
	6	92821040	1	Key	Not
	7	92763978	1	Housing	Hus
	8	39437637	1	Gasket	Pakning
	9	35593490	1	Seal	Tætning
	10	95358024	1	'O' Ring	O-Ring
	11	92763960	1	Plate, cover	Dæk plade
	12	92070036	1	Bracket	Beslag
	13	92087725	1	Bracket	Beslag
	14	35273812	2	Mount	Afstandsstykke
	15	35101468	2	Washer, snubber	Tætningsskive
	16	35273937	2	Washer, snubber	Tætningsskive
	17	92117480	2	Plate, cover	Dæk plade
	18	30346662	1	Washer	Skive
	19	35327543	1	Bearing	Leje
	20	35326602	1	Plate, retaining	Låseplade
Revision 01 06/92					
7.3.1 AIREND ASSEMBLY LUFTENDE					

LUFTENDE

T1512
Revision 00
06/92



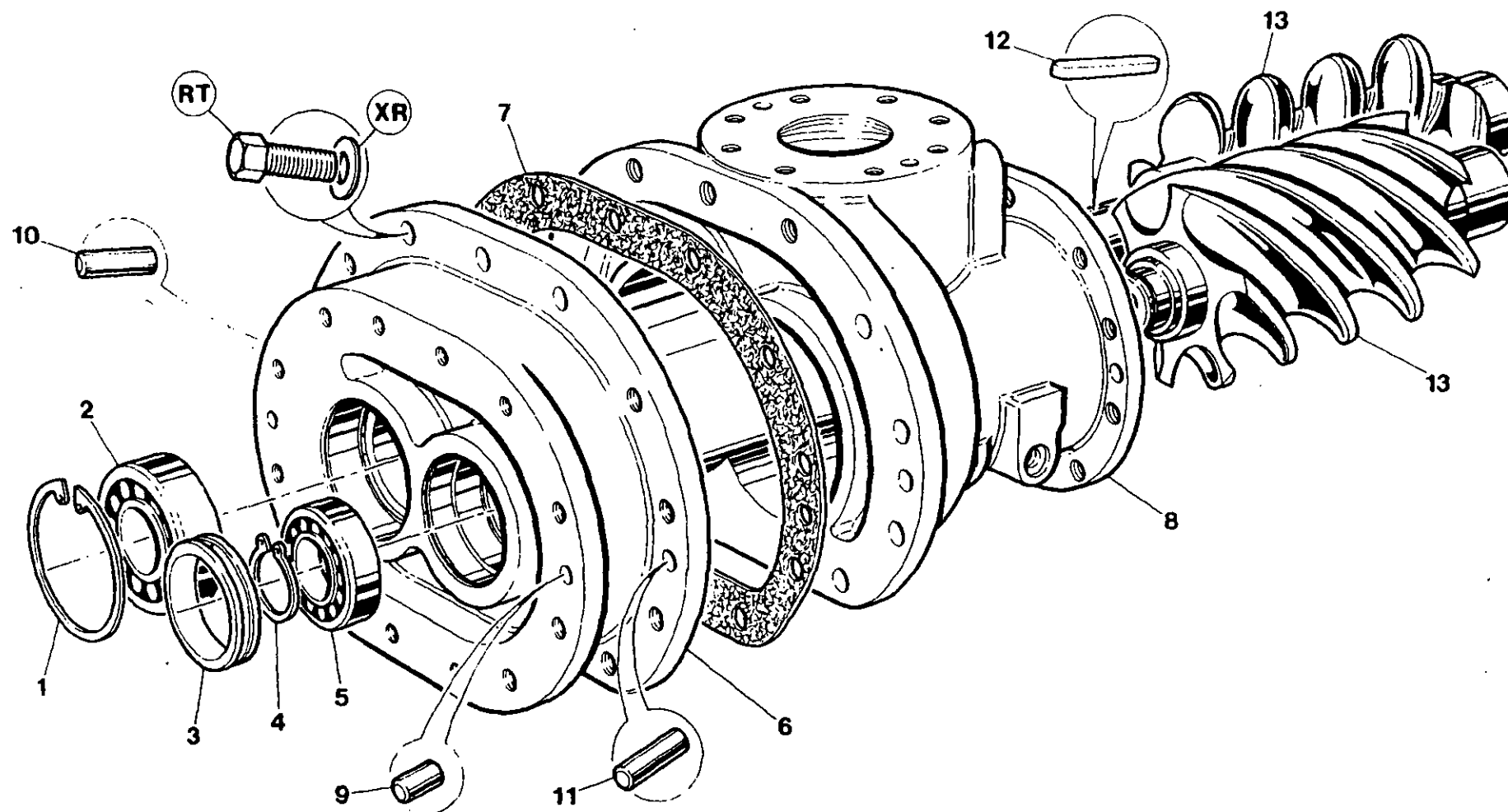
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	21	35851153	1	Shaft	Aksel
	22	35288786	1	Gear set	Gear sæt
	23	35327626	1	Spacer	Afstandsskive
	24	35255827	1	Plate, retaining	Låseplade
	25	35262716	1	Spacer	Afstandsskive
	26	35329192	1	Key	Not
	27	95223178	1	Circlip	Fjederring
	28	95096806	1	Circlip	Fjederring
	29	35313568	1	Bearing	Leje
	30	35364660	1	Spacer	Afstandsskive
	*31	92708874	1	Plate, drive	Plade, drev
				* Not illustrated	* Ikke illustreret
Revision 01 06/92					
7.3.3 AIREND ASSEMBLY LUFTENDE					

7.3.4

AIREND ASSEMBLY

LUFTENDE

HP400 CA
Zone 2



T1513
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	95223194	1	Circlip	Fjederring
	2	35313535	1	Bearing	Leje
	3	35270131	1	Spacer	Afstandsskive
	4	95223475	1	Circlip	Fjederring
	5	35313543	1	Bearing	Leje
	6	92540764	1	Housing	Hus
	7	35518497	1	Gasket	Pakning
	8	92504554	1	Housing	Hus
	9	95078549	2	Pin, locating	Styretap
	10	95239927	1	Pin, locating	Styretap
	11	35332915	1	Pin, locating	Styretap
	12	95381109	1	Key	Not
	13	35085042	1	Set, rotor	Sæt, rotor
Revision 01 06/92					

7.3.5

AIREND ASSEMBLY

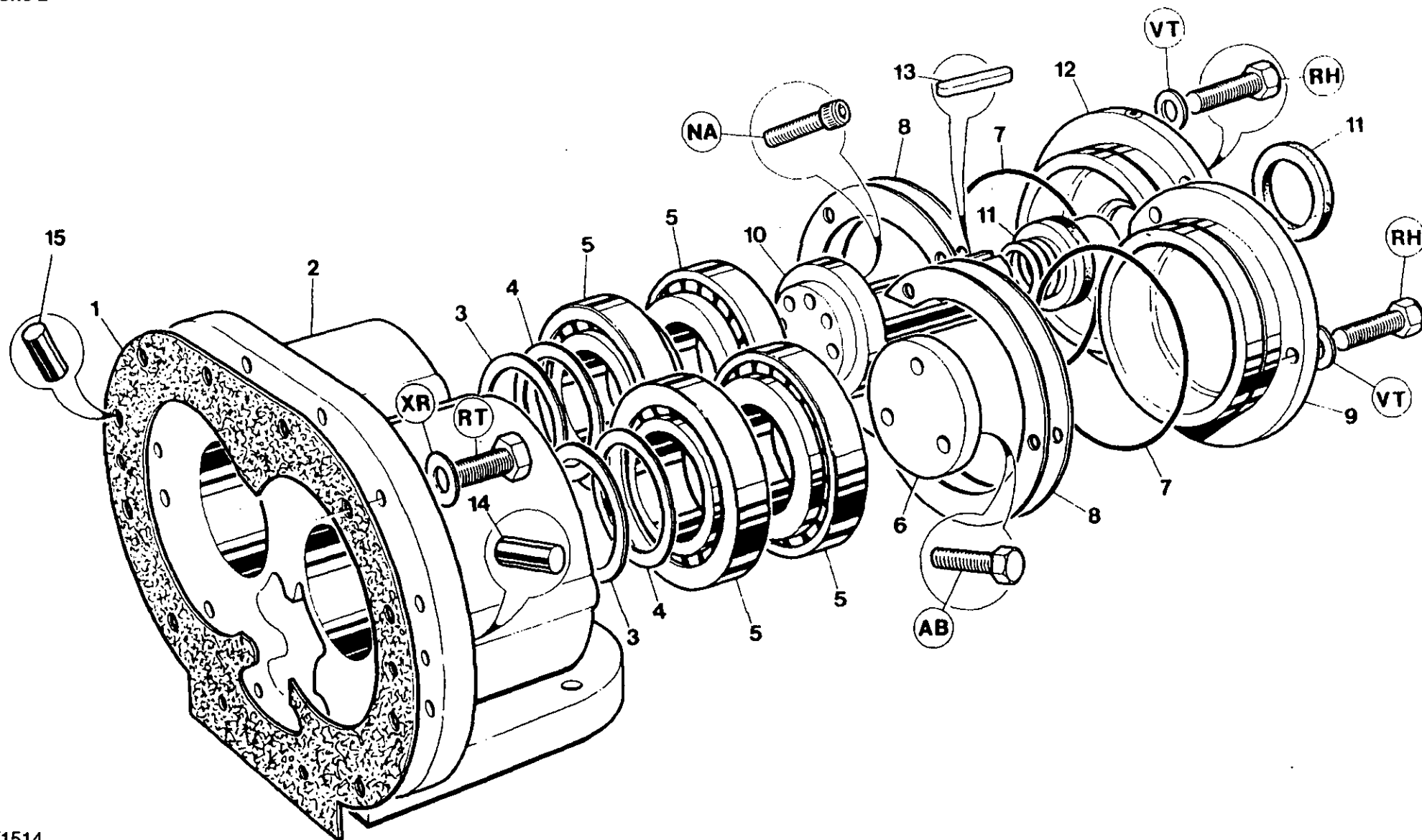
LUFTENDE

7.3.6

AIREND ASSEMBLY

LUFTENDE

HP400 CA
Zone 2



T1514
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	39437629	1	Gasket	Pakning
	2	92504539	1	Housing	Hus
	3	35313600	4	Set, shim.	Sæt , shims
	4	35313618	4	Set, shim	Sæt , shims
	5	39437595	4	Bearing	Leje
	6	35262690	1	Plate, retaining	Låseplade
	7	95060224	2	'O' Ring	O-Ring
	8	92679323	2	Set, shim	Sæt , shims
	9	92544311	1	Plate, cover	Dæk plade
	10	35600840	1	Shaft	Aksel
	11	35598556	1	Seal	Tætning
	12	92763952	1	Plate, cover	Dæk plade
	13	35325679	1	Key	Not
	14	35332915	1	Pin	Stift
	15	95239927	1	Pin	Stift
Revision 01 06/92					

7.3.7

AIREND ASSEMBLY

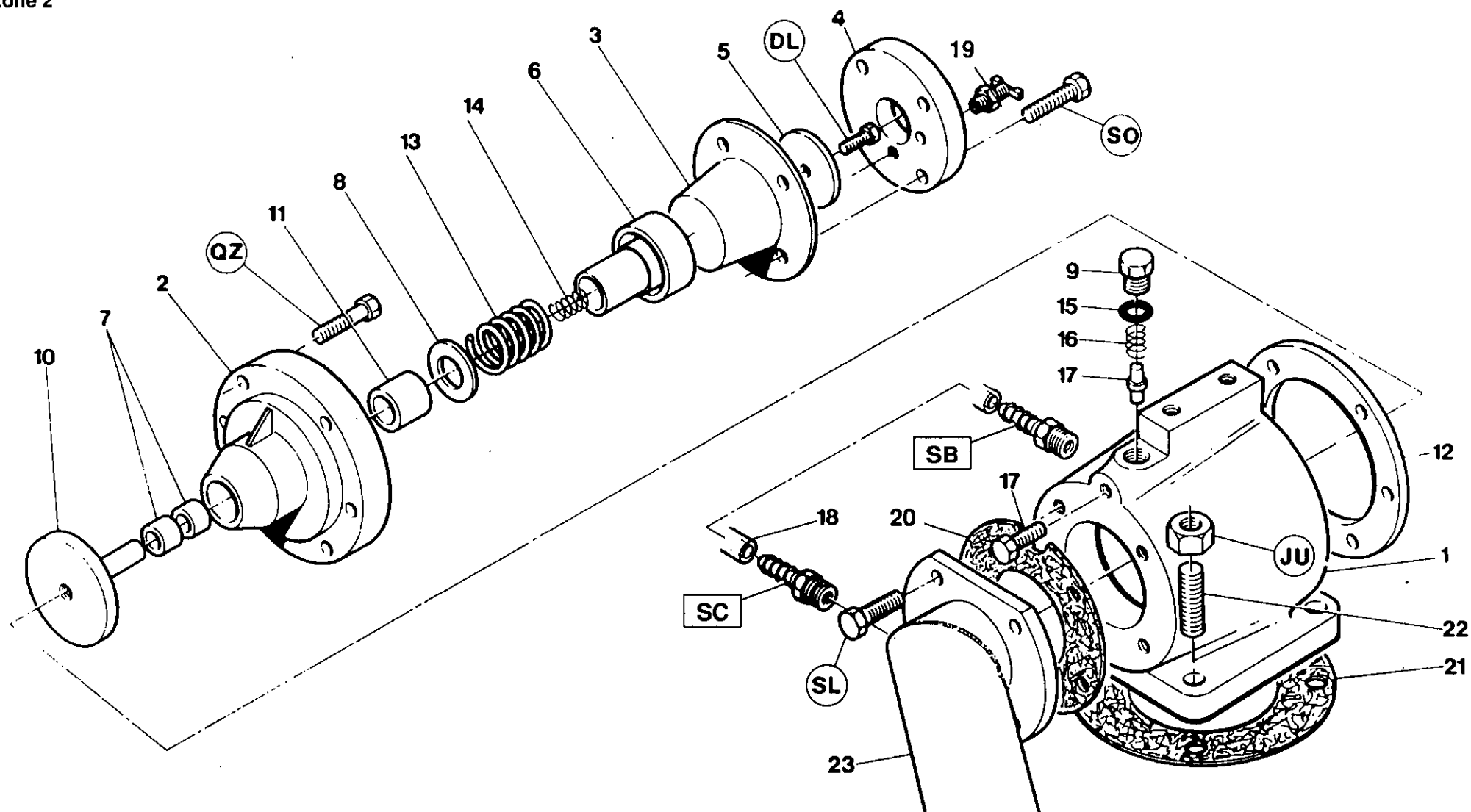
LUFTENDE

7.3.8

AIREND ASSEMBLY

LUFTENDE

HP400 CA
Zone 2



	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1-17	35060631	1	Valve, unloader	Aflastventil
	1	36718427	1	Body	Sokkel
	2	35833227	1	Housing	Hus
	3	35317197	1	Diaphragm	Membran
	4	35836949	1	Plate, cover	Dæk plade
	5	35317239	1	Washer	Skive
	6	35588193	1	Piston	Stempel
	7	35318005	2	Bush	Bøsning
	8	35317205	1	Washer	Skive
	9	35278555	1	Plug	Prop
	10	35591122	1	Valve	Ventil
	11	35318013	1	Bush	Bøsning
	12	35588300	1	Gasket	Pakning
	13	35322767	1	Spring	Fjeder
	14	92829233	1	Spring	Fjeder
	15	35278589	1	'O' Ring	O-Ring
	16	35318914	1	Spring	Fjeder
	17	35317213	1	Pin	Stift
	18	35282292	0.4m	Tube (Nylon)	Nylon slange
	19	95250692	1	Valve, drain	Dræn ventil
	20	35588318	1	Gasket	Pakning
	21	35589589	1	Gasket	Pakning
	22	92040294	4	Stud	Tap
Revision 01 06/92	23	92920131	1	Pipe	Rør

7.3.9

AIREND ASSEMBLY

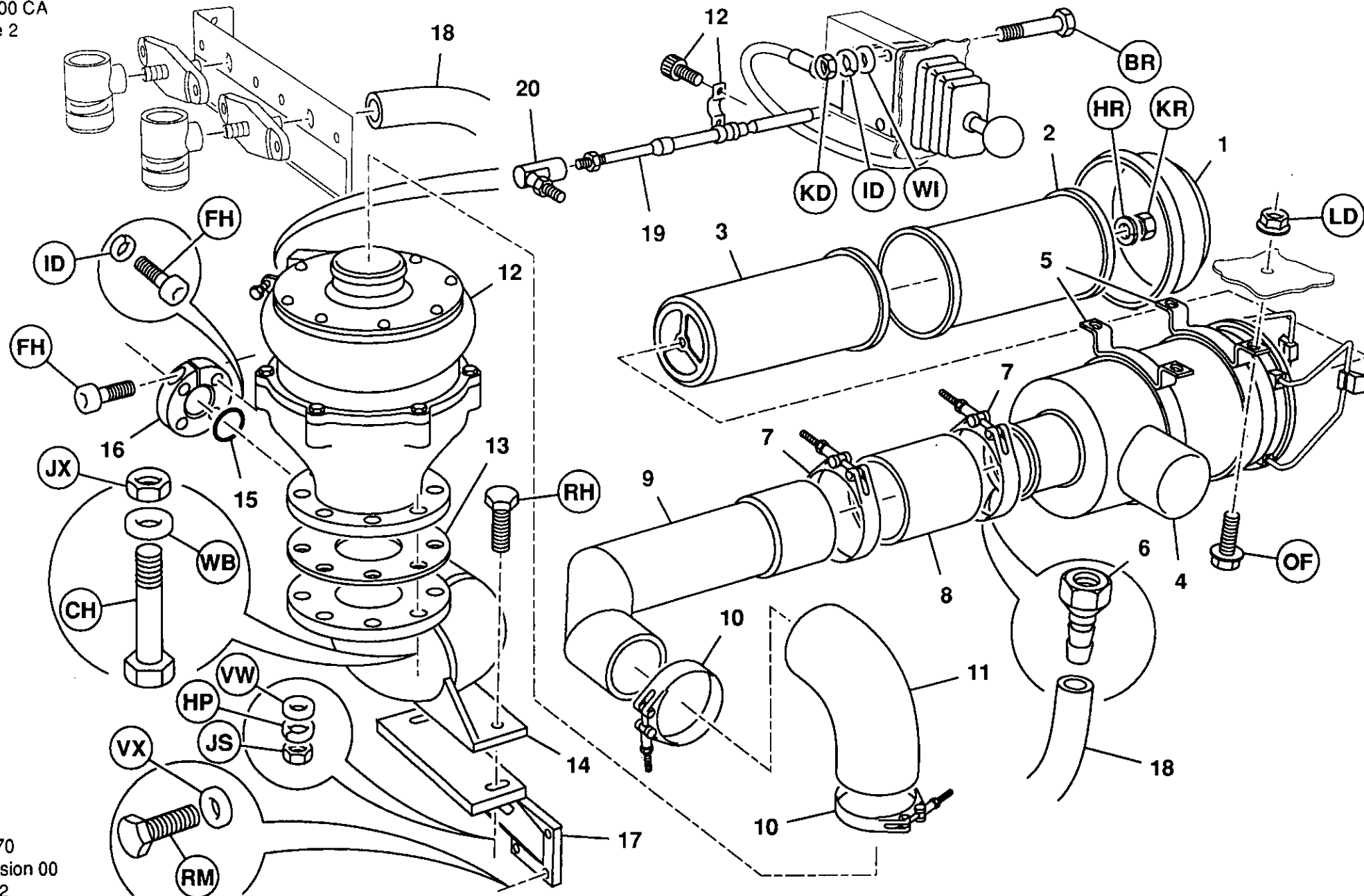
LUFTENDE

7.4.0

AIR INTAKE SYSTEM
- ENGINE

LUFT INDSUGNINGS
SYSTEM - MOTOR

HP400 CA
Zone 2



T1970
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1-4	92666080	1	Filter assembly	Filtermonteringssæt
	1	-	1	Cap, end	Dæksel ende
	2	92686922	1	Element	Element
	3	92686930	1	Element, safety	Sikkerheds element
	4	-	1	Housing	Hus
	5	92674811	2	Band, mounting	Monterings bånd
	6	92055235	1	Tailpiece	Halestykke
	7	92788041	2	Clamp, band	Spændebånd
	8	92799964	1	Hose	Slange
	9	92908847	1	Pipe	Rør
	10	92034172	2	Clamp, band	Spændebånd
	11	92419795	1	Elbow	Vinkel
	12	92870864	1	Valve, inlet/overspeed	Ventil, indsugning/overspeed
	13	92546498	1	Gasket	Pakning
	14	92870872	1	Pipe	Rør
	15	92896091	1	'O' Ring	O-Ring
	16	92895580	1	Flange	Flange
	17	92898725	1	Bracket	Beslag
	18	92111335	2.5m	Hose	Slange
	19	92546415	1	Lever assembly	Monteringssæt, arm
	20	92924463	1	Ball-joint	Kugleled
Revision 01 06/92					

7.4.1

**AIR INTAKE SYSTEM
- ENGINE**

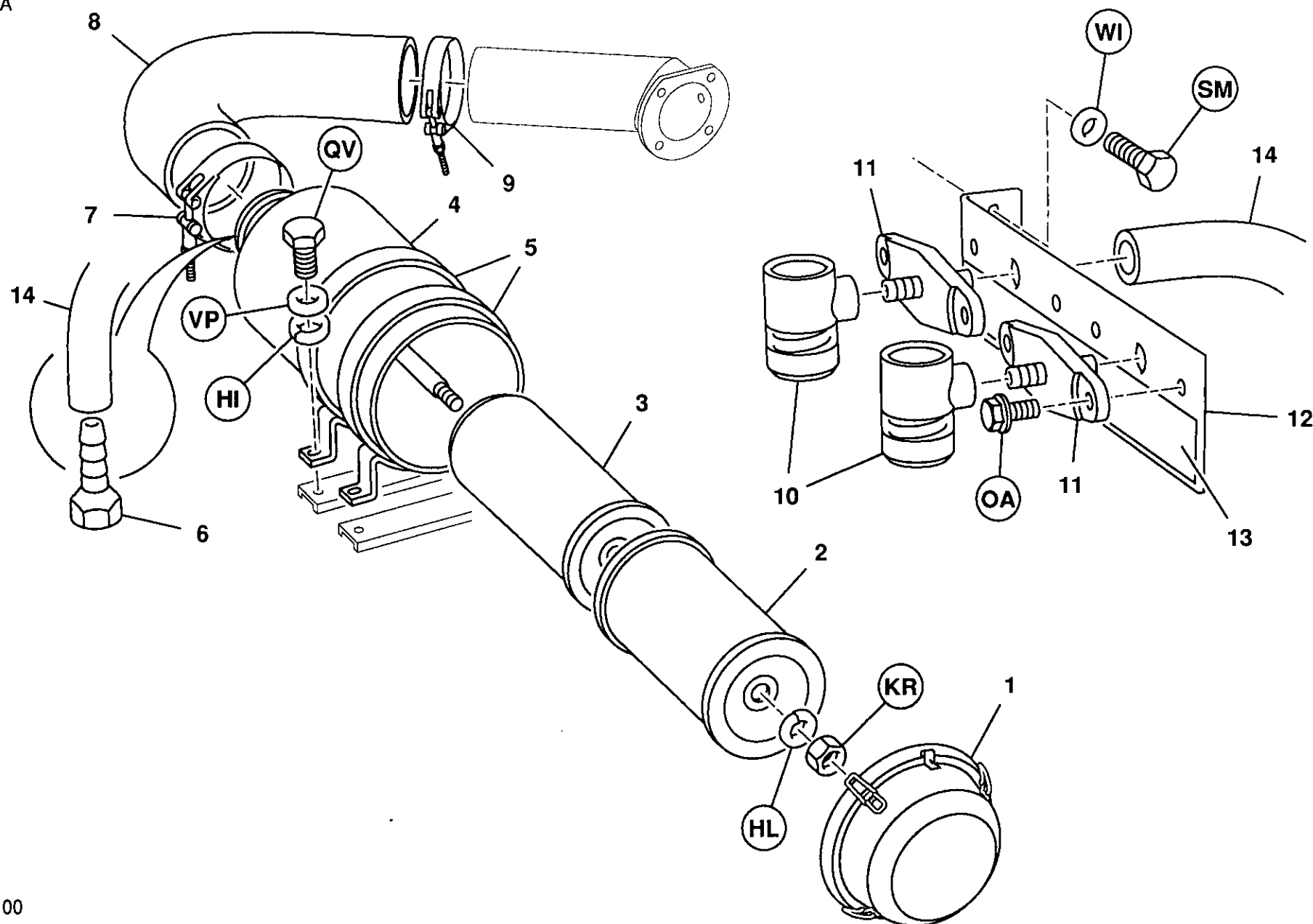
**LUFT INDUGNINGS
SYSTEM - MOTOR**

7.4.2

AIR INTAKE SYSTEM
- AIREND

LUFT INDSUGNINGS
SYSTEM - MOTOR

HP400 CA
Zone 2



T1983
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1-4	92666098	1	Filter assembly	Filtermonteringssæt
	1	-	1	Cap, end	Dæksel ende
	2	92686948	1	Element	Element
	3	92686955	1	Element, safety	Sikkerheds element
	4	-	1	Housing	Hus
	5	92661818	2	Band, mounting	Monterings bånd
	6	92055235	1	Tailpiece	Halestykke
	7	92280239	1	Clamp, band	Spændebånd
	8	92909209	1	Hose	Slange
	9	92059039	1	Clamp, band	Spændebånd
	10	92419290	2	Indicator	Indikator
	11	92113513	2	Flange	Flange
	12	92720929	1	Bracket	Beslag
	13	92720937	1	Decal	Transfer
	14	92111335	2.5m	Hose	Slange
Revision 01 06/92					

7.4.3

**AIR INTAKE SYSTEM
- AIREND**

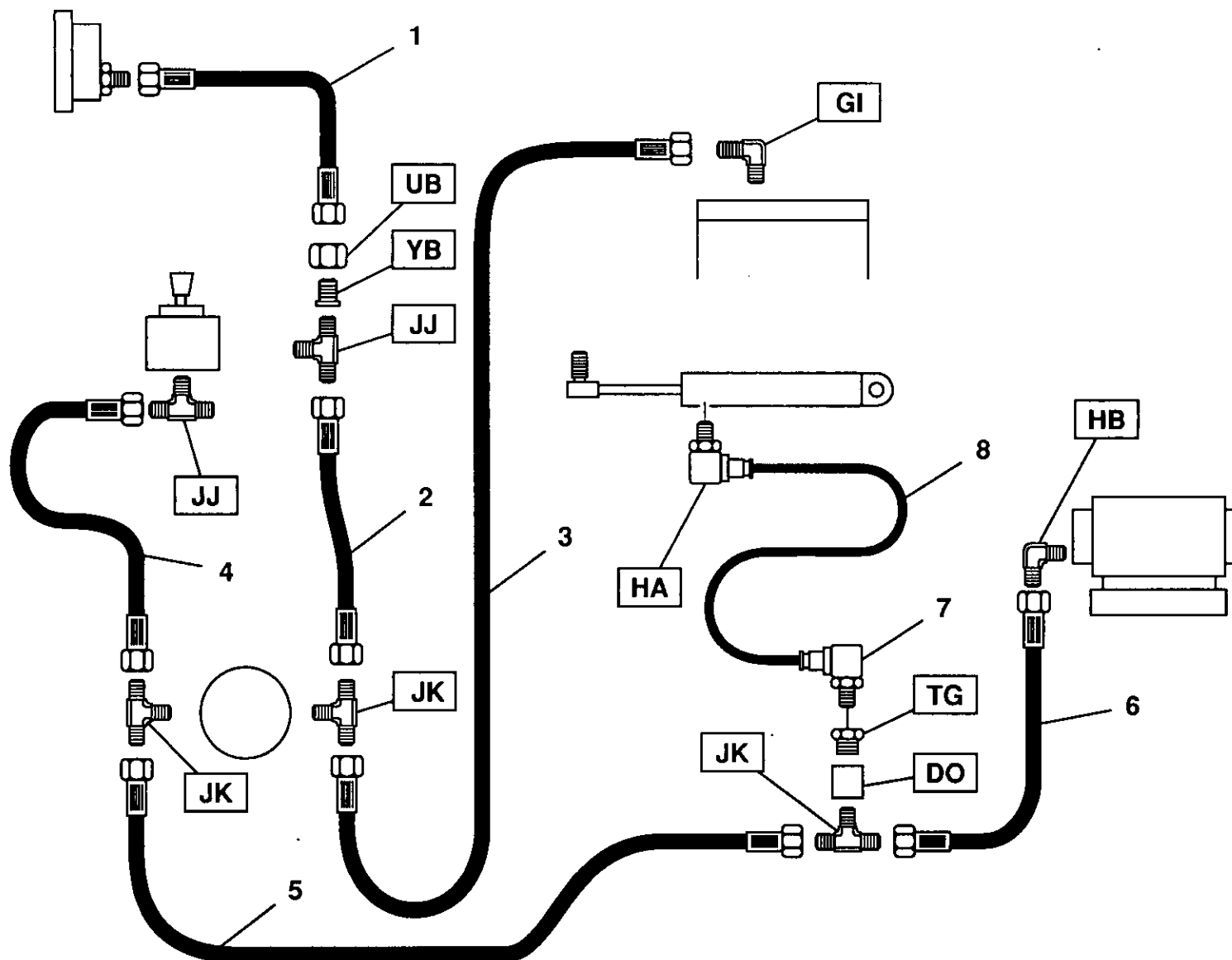
**LUFT INDSUGNINGS
SYSTEM - LUFTENDE**

7.5.0

REGULATION SYSTEM
- SCHEMATIC

REGULERINGSSYSTEM
- SKEMATISK

HP400 CA
Zone 2



T1971
Revision 00
06/92

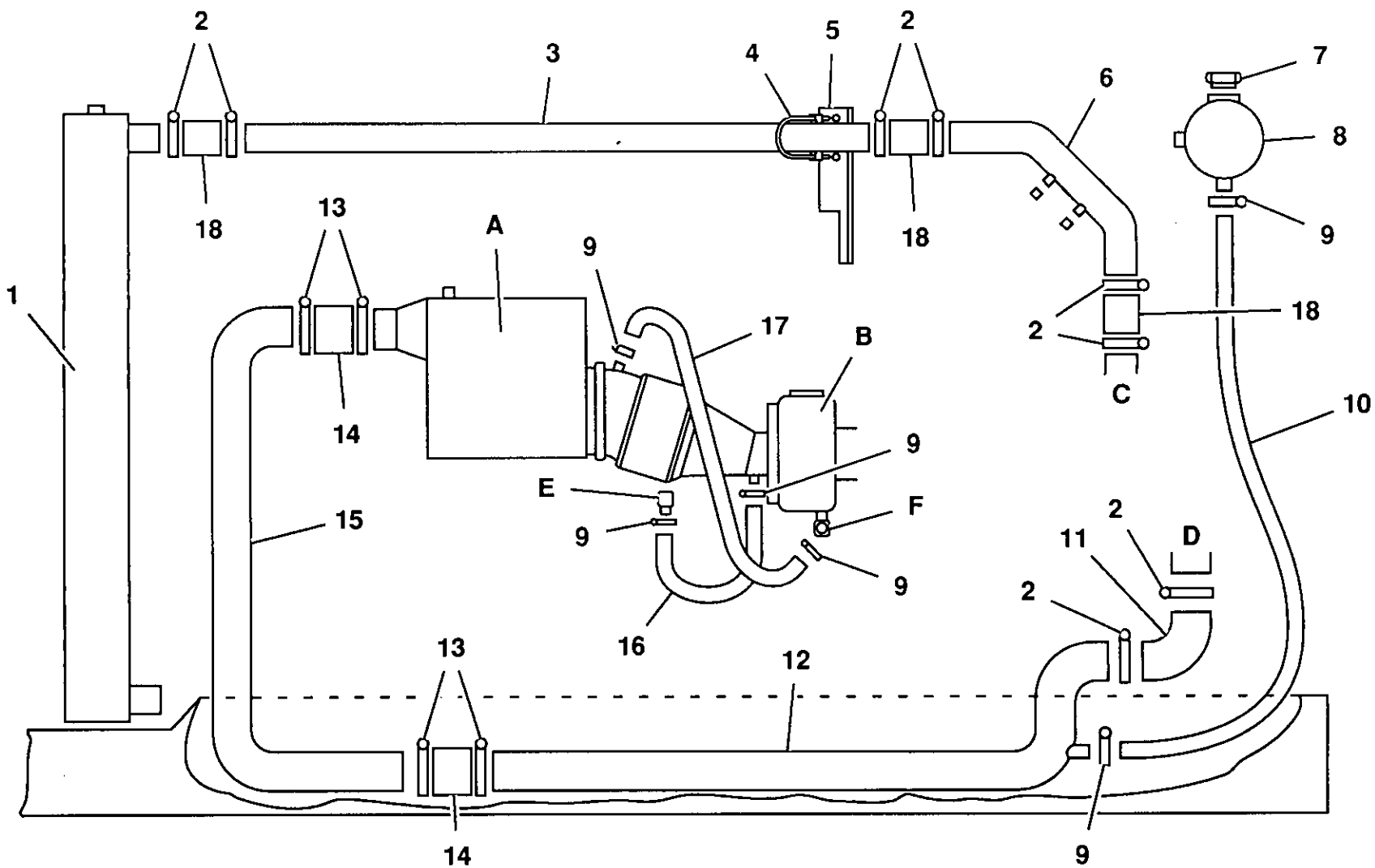
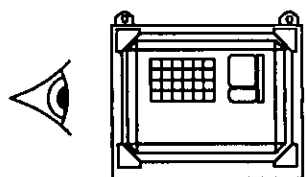
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	32583076	1	Hose assembly	Slange
	2	92902147	1	Tube assembly	Rør
	3	92658012	1	Hose assembly	Slange
	4	92902311	1	Tube assembly	Rør
	5	92478114	1	Hose assembly	Slange
	6	35279934	1	Hose assembly	Slange
	7	92799360	1	Valve, check	Kontrolventil
	8	92979378	1	Tube (Nylon)	Nylon slange
Revision 01 06/92					
7.5.1		REGULATION SYSTEM – SCHEMATIC		REGULERINGS SYSTEM – SKEMATISK	

7.6.0

COOLING SYSTEM - SCHEMATIC

KØLESYSTEM - SKEMATISK

HP400 CA
Zone 2



T1972
Revision 00
06/92

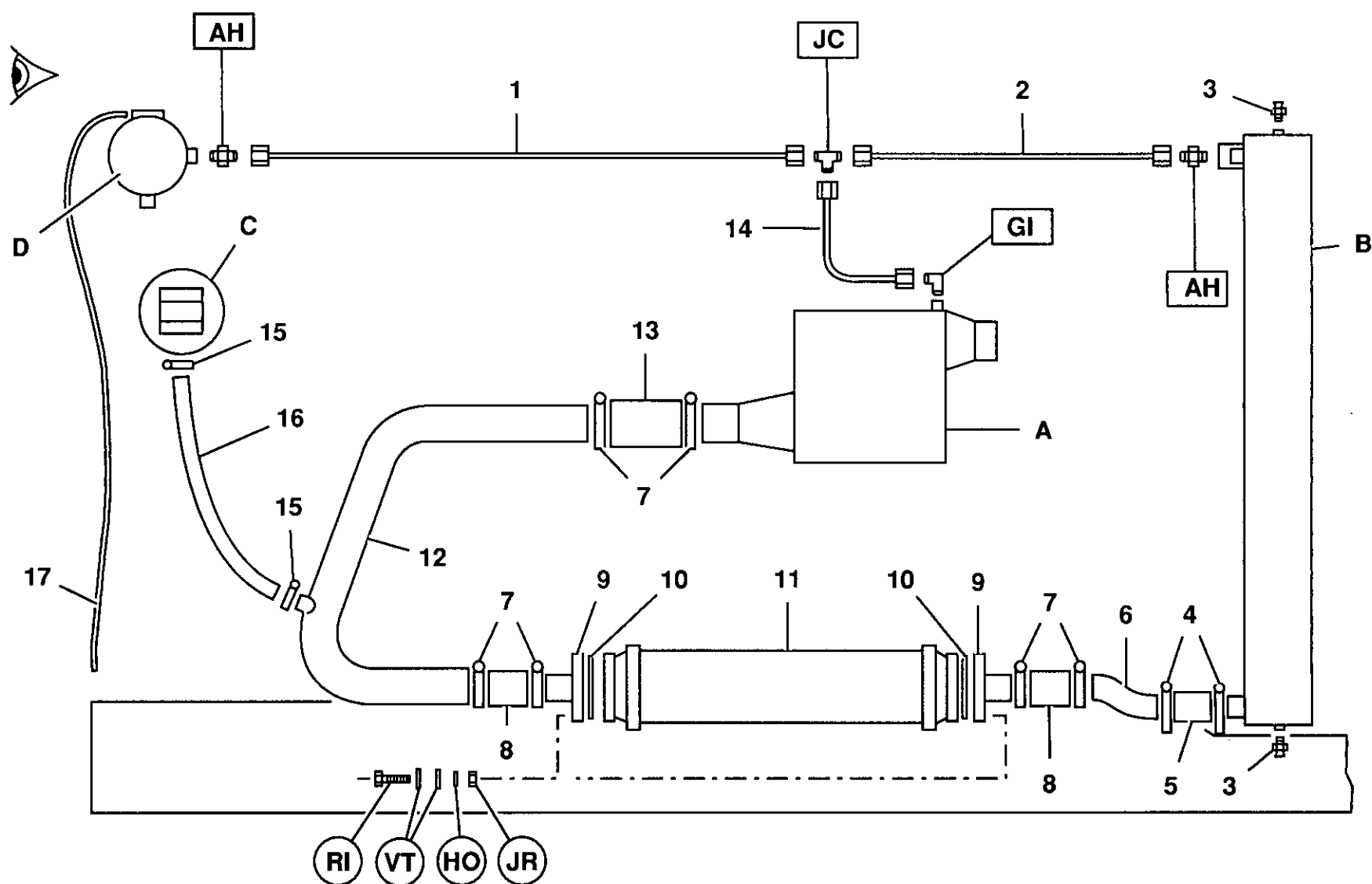
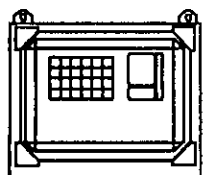
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92870385	1	Radiator	Køler
	2	92668896	8	Clamp	Spændebånd
	3	92910512	1	Pipe	Rør
	4	92321926	1	Clamp	Spændebånd
	5	92908961	1	Bracket	Beslag
	6	92906015	1	Pipe	Rør
	7	92041664	1	Cap, radiator	Køler dæksel
	8	92668932	1	Tank, radiator header	Tryk tank
	9	92321702	6	Clip, hose	Spændebånd, slange
	10	92417849	1.5m	Hose assembly	Slange
	11	92788578	1	Elbow	Vinkel
	12	92911866	1	Pipe	Rør
	13	92043233	4	Clamp	Spændebånd
	14	92040757	2	Connector	Forbindelsesnippel
	15	92911874	1	Pipe	Rør
	16	92908599	0.4m,	Hose assembly	Slange
	17	92908599	0.9m	Hose assembly	Slange
	18	35221878	3	Connector	Forbindelsesnippel
				KEY	
				A Exhaust gas cooler	A Køler for udstødning
				B Turbo	B Turbo
				C Top of engine	C Top af motor
				D Bottom of engine	D Bund af motor
				E Elbow (engine block)	E Vinkel (motorblok)
				F Elbow (turbo)	F Vinkel (turbo)
Revision 01 06/92					
7.6.1		COOLING SYSTEM – SCHEMATIC		KØLESYSTEM – SKEMATISK	

7.6.2

COOLING SYSTEM - SCHEMATIC

KØLESYSTEM - SKEMATISK

HP400 CA
Zone 2



T1973
Revision 00
06/92

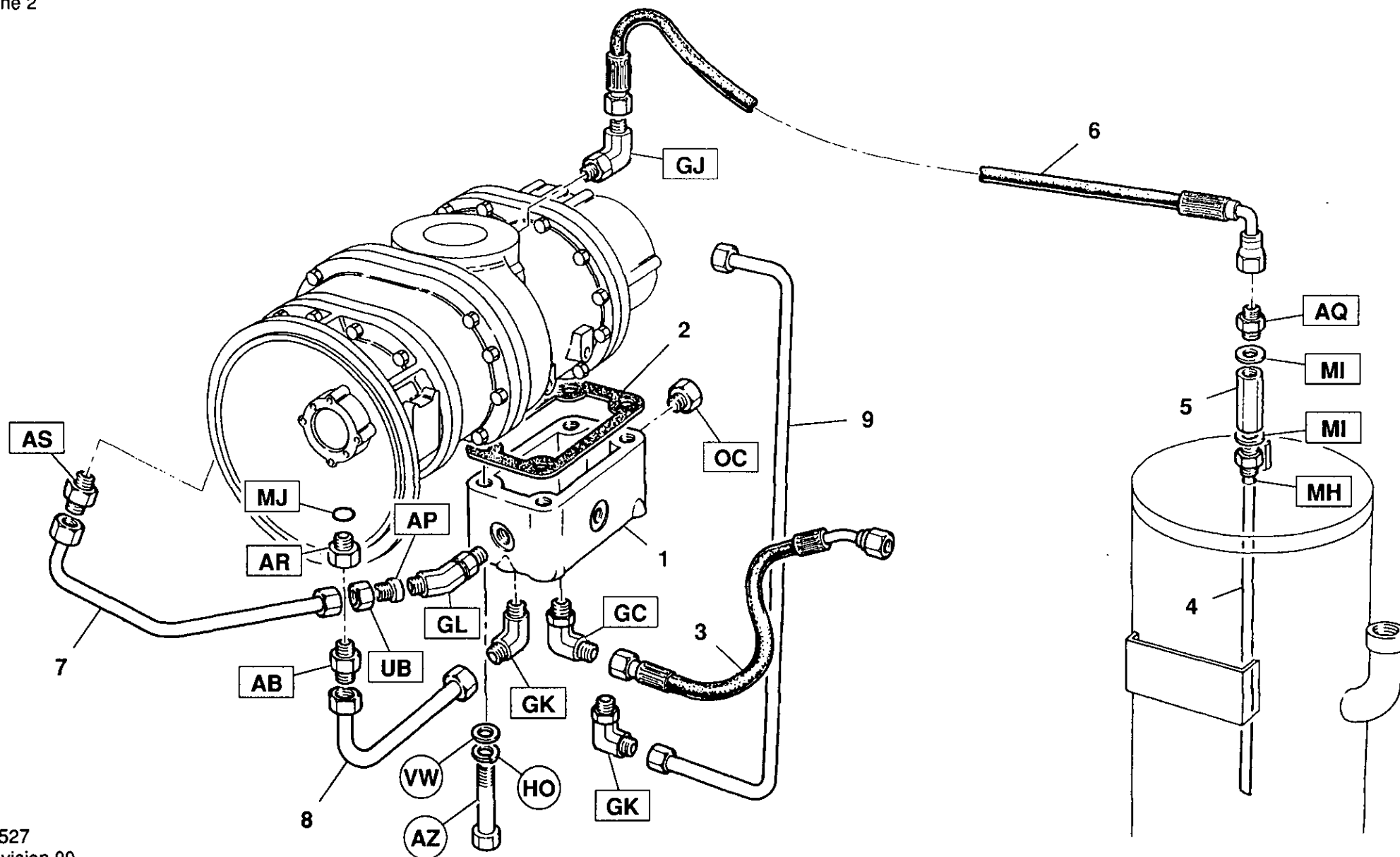
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92908623	1	Tube assembly	Rør
	2	92908607	1	Tube assembly	Rør
	3	92037464	2	Valve, drain	Dræn ventil
	4	92668896	2	Clamp	Spændebånd
	5	92522226	1	Connector	Forbindelsesnippel
	6	92896083	1	Pipe	Rør
	7	92043233	6	Clamp	Spændebånd
	8	92347459	2	Connector	Forbindelsesnippel
	9	92901453	2	Flange	Flange
	10	92924240	2	Gasket	Pakning
	11	92870237	1	Cooler	Køler
	12	92896075	1	Pipe	Rør
	13	92040757	1	Connector	Forbindelsesnippel
	14	92908615	1	Tube assembly	Rør
	15	92321702	2	Clip, hose	Spændebånd, slange
	16	92908599	0.9m	Hose assembly	Slange
	17	92111335	2m	Hose assembly	Slange
KEY A Exhaust gas cooler A Køler for udstødning B Radiator B Køler C Manifold & water loss circuit C Manifold & kølevands kredsløb D Header tank D Tryk tank					
Revision 01 06/92					
7.6.3		COOLING SYSTEM – SCHEMATIC		KØLESYSTEM – SKEMATISK	

7.6.4

COOLING SYSTEM

KØLESYSTEM

HP400 CA
Zone 2



T1527
Revision 00
06/92

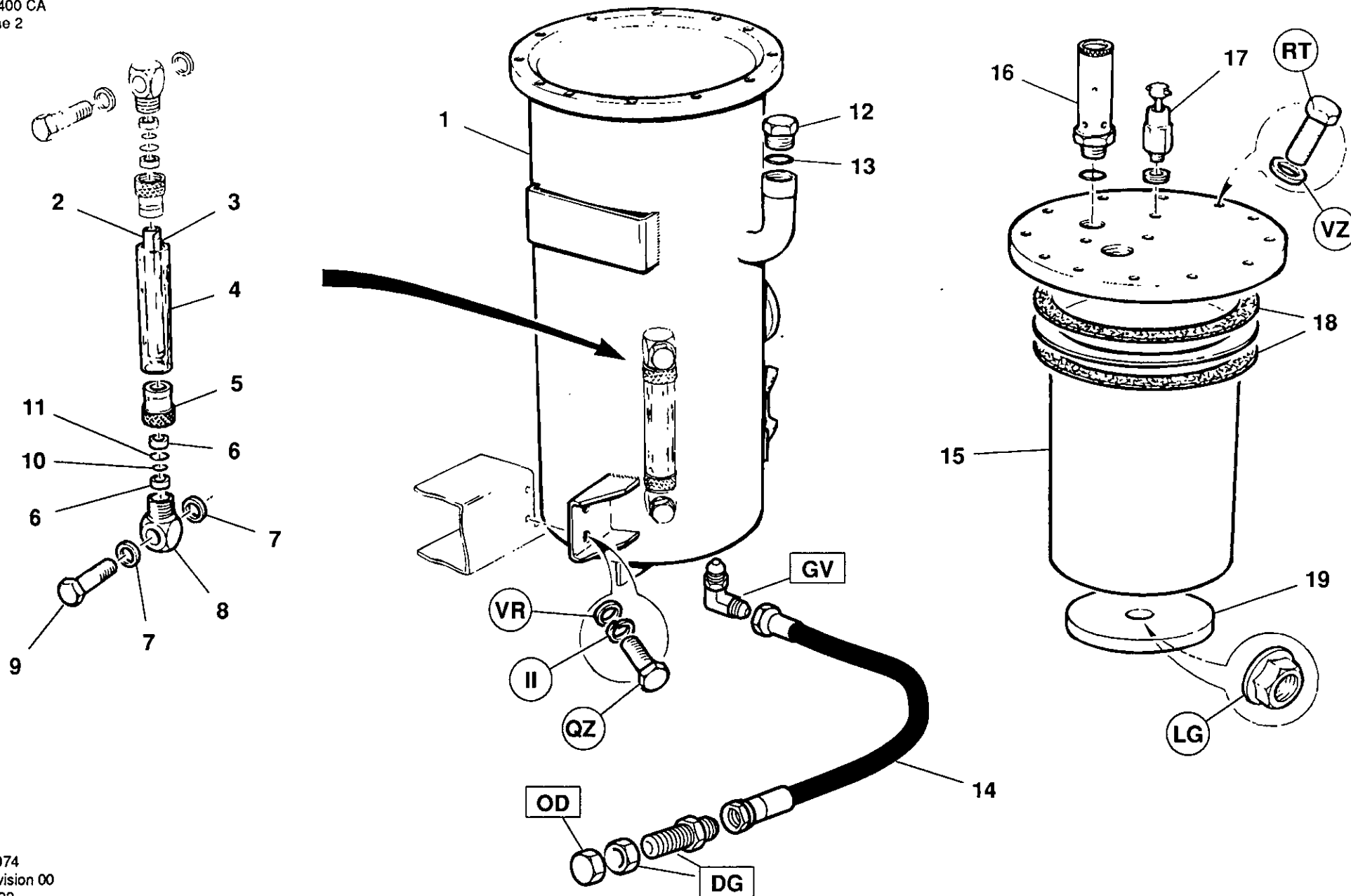
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92657089	1	Manifold	Manifold
	2	35275908	1	Gasket	Pakning
	3	92086479	1	Hose assembly	Slange
	4	92699206	1	Drop-tube	Drænrør
	5	92101054	1	Valve	Ventil
	6	92522762	1	Hose assembly	Slange
	7	92083294	1	Tube assembly	Rør
	8	92528090	1	Tube assembly	Rør
	9	92528116	1	Tube assembly	Rør
Revision 01 06/92					
7.6.5 COOLING SYSTEM KØLESYSTEM					

7.6.6

COOLING SYSTEM

KØLESYSTEM

HP400 CA
Zone 2



	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92709674	1	Tank, separator	Separator tank
	2-11	92702554	1	Sight-glass	Skueglas
	2	92708882	1	Tube assembly	Rør
	3	92708908	1	Indicator	Indikator
	4	92708890	1	Guard	Skærm
	5	92095397	2	Nut	Møtrik
	6	92095405	4	Ferrule	Omløber
	7	92293661	4	Seal	Tætning
	8	92095439	2	Collar	Afstandsring
	9	92095447	2	Nipple	Nippel
	10	92095413	2	'O' Ring	O-Ring
	11	92095421	2	'O' Ring	O-Ring
	12	35579630	1	Plug	Prop
	13	35279942	1	'O' Ring	O-Ring
	14	92503002	1	Hose assembly	Slange
	15	92699198	1	Element	Element
	16	92547231	1	Valve, safety	Sikkerheds ventil
	17	92043017	1	Valve	Ventil
	18	92547801	2	Gasket	Pakning
	19	92080662	1	Plate	Plade

Revision 01
06/92

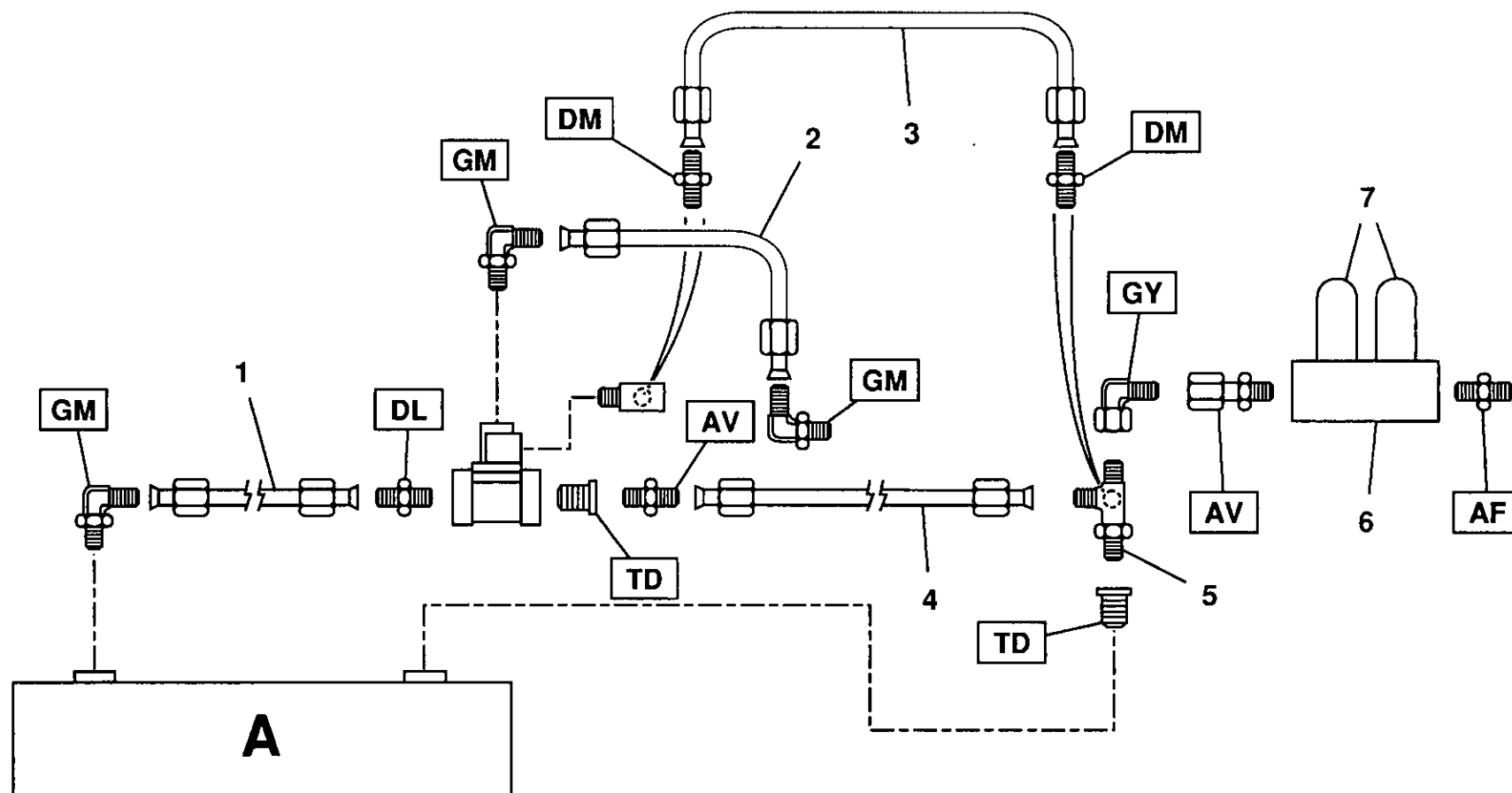
7.6.7 COOLING SYSTEM KØLESYSTEM

7.6.8

COOLING SYSTEM -SCHEMATIC

KØLESYSTEM - SKEMATISK

HP400 CA
Zone 2



ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2				
1	92896026	1	Tube assembly	Rør
2	92896018	1	Tube assembly	Rør
3	92901461	1	Tube assembly	Rør
4	92896034	1	Tube assembly	Rør
5	92901487	1	Tee	Tee
6,7	92088822	1	Filter, oil	Filter, olie
6	92087741	1	Head, filter	Filter hoved
7	92118678	2	Element	Element

KEY

A Køler for olie

Revision 01
06/92

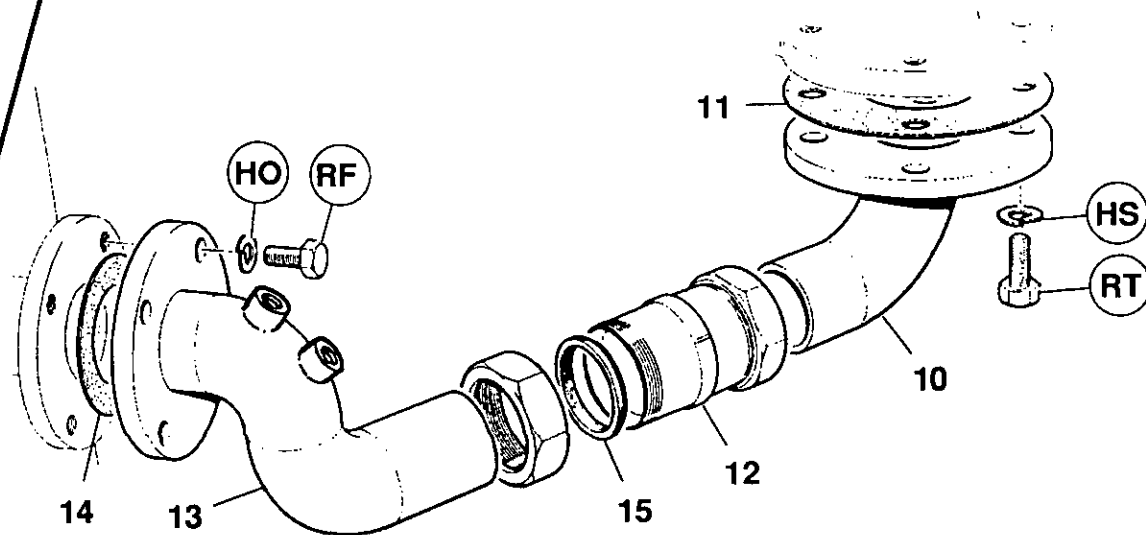
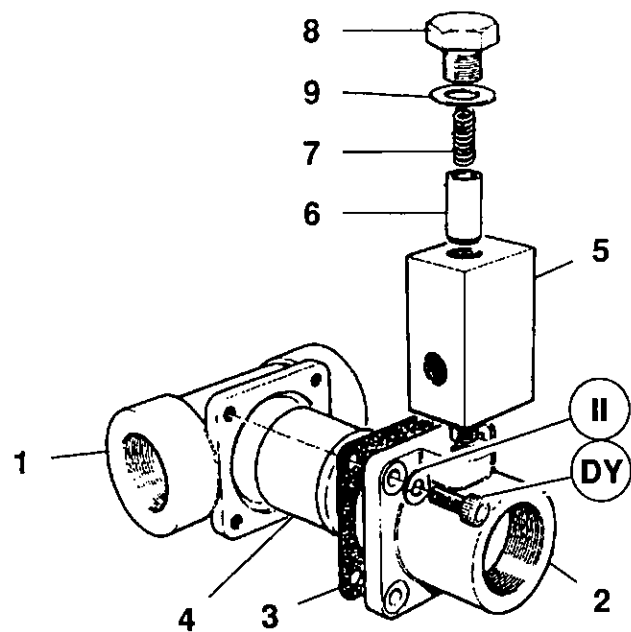
COOLING SYSTEM -SCHEMATIC

7.6.10

COOLING SYSTEM

KØLESYSTEM

HP400 CA
Zone 2



	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1-4	92752203	1	Valve, temperature bypass	Ventil for temperatur by-pass
	1	92707512	1	Housing	Hus
	2	92707520	1	Cover	Dæksel
	3	92707538	1	Gasket	Pakning
	4	35288117	1	Valve	Ventil
	5-9	92707678	1	Valve assembly	Ventil monterings sæt
	5	92708155	1	Housing	Hus
	6	35163054	1	Valve	Ventil
	7	30672430	1	Spring	Fjeder
	8	35214543	1	Plug	Prop
	9	30549919	1	Gasket	Pakning
	10	92080423	1	Pipe	Rør
	11	35575570	1	Gasket	Pakning
	12	92535277	1	Coupling	Kobling
	13	92080431	1	Pipe	Rør
	14	92676667	1	Gasket	Pakning
	15	92740869	2	Seal	Tætning
Revision 01 06/92					

7.6.11

COOLING SYSTEM

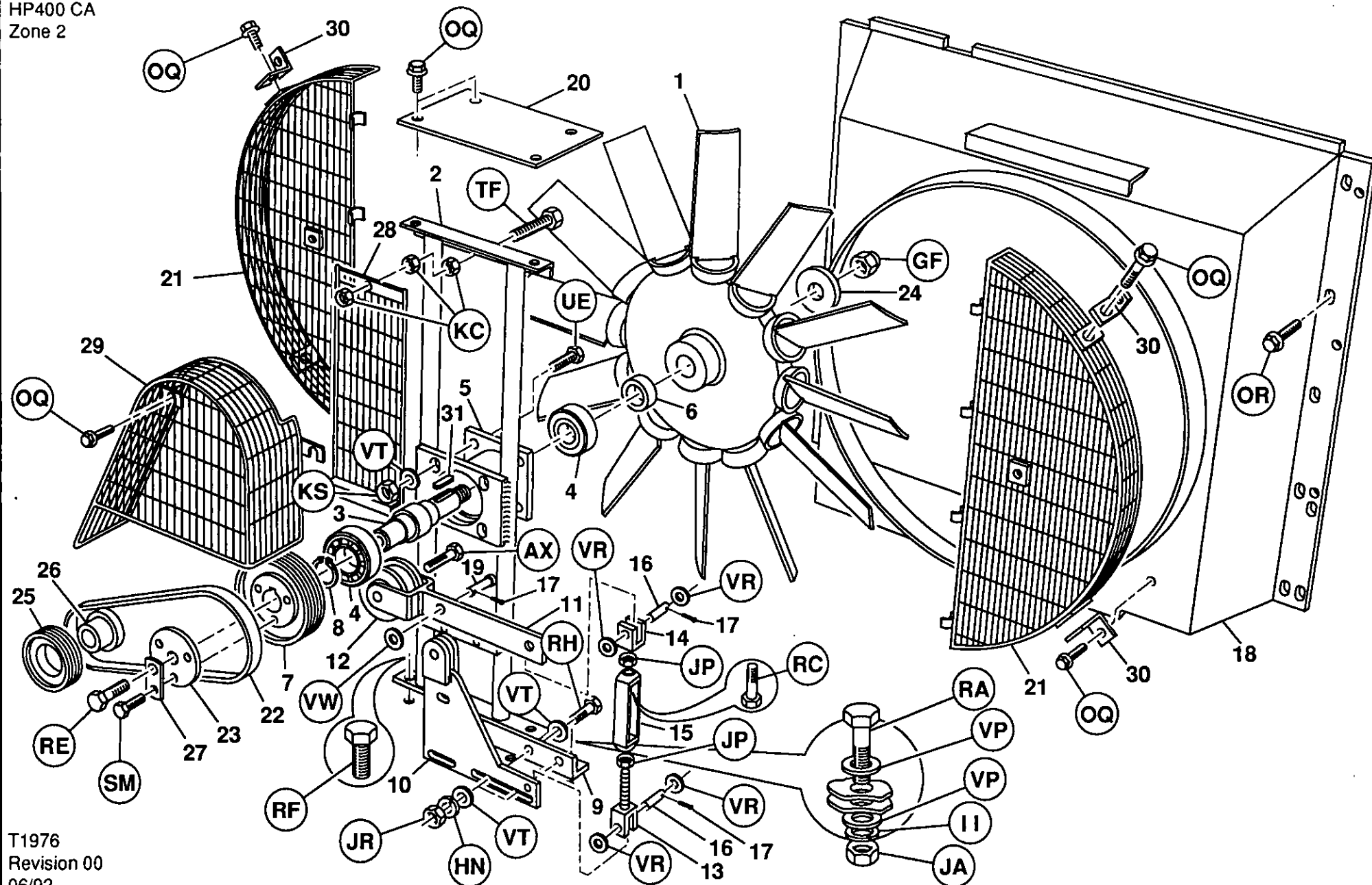
KØLESYSTEM

7.6.12

COOLING SYSTEM

KØLESYSTEM

HP400 CA
Zone 2

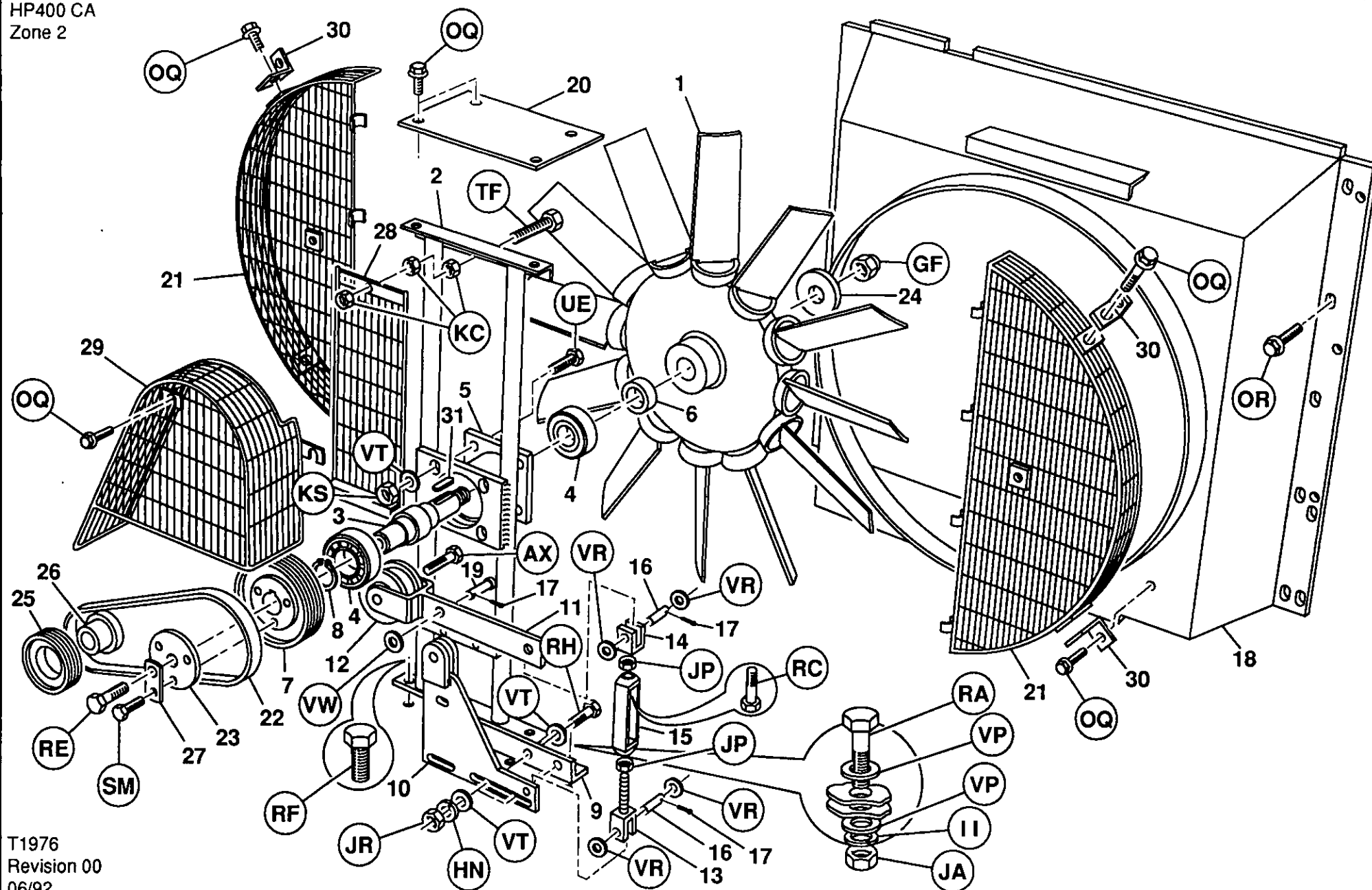


T1976
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92892512	1	Fan	Ventilator
	2	92887256	1	Support	Beslag
	3	92680270	1	Shaft	Aksel
	4	92064559	2	Bearing	Leje
	5	92065408	1	Housing	Hus
	6	92705342	1	Spacer	Afstandsskive
	7	92895606	1	Pulley	Remskive
	8	35280353	1	Circlip	Fjederring
	9	92901867	1	Bracket	Beslag
	10	92049881	1	Support	Beslag
	11	92049899	1	Bracket	Beslag
	12	92531490	1	Wheel	Hjul
	13	92038660	1	Clevis	Gaffel
	14	92038652	1	Clevis	Gaffel
	15	92038678	1	Adjuster	Justerstykke
	16	92038918	2	Pin	Stift
	17	92256759	5	Pin	Stift
	18	92887066	1	Cowl, fan	Blæser kappe
	19	92049915	1	Pin	Stift
Revision 01 06/92					
7.6.13 COOLING SYSTEM KØLESYSTEM					

KØLESYSTEM

T1976
Revision 00
06/92



	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	20	92892769	1	Plate, adaptor	Plade for adaptor
	21	92902162	2	Guard	Skærm
	22	92887017	1	Belt, drive	Drivrem
	23	92680776	1	Plate, retaining	Låseplade
	24	92409671	1	Plate, retaining	Låseplade
	25	92895598	1	Pulley	Remskive
	26	92895614	1	Ring, locking	Låsering
	27	92772896	1	Washer, tab	Låseskive
	28	92902204	1	Guard	Skærm
	29	92902196	1	Guard	Skærm
	30	92920115	4	Bracket	Beslag
	31	92168871	1	Key	Not
Revision 01 06/92					

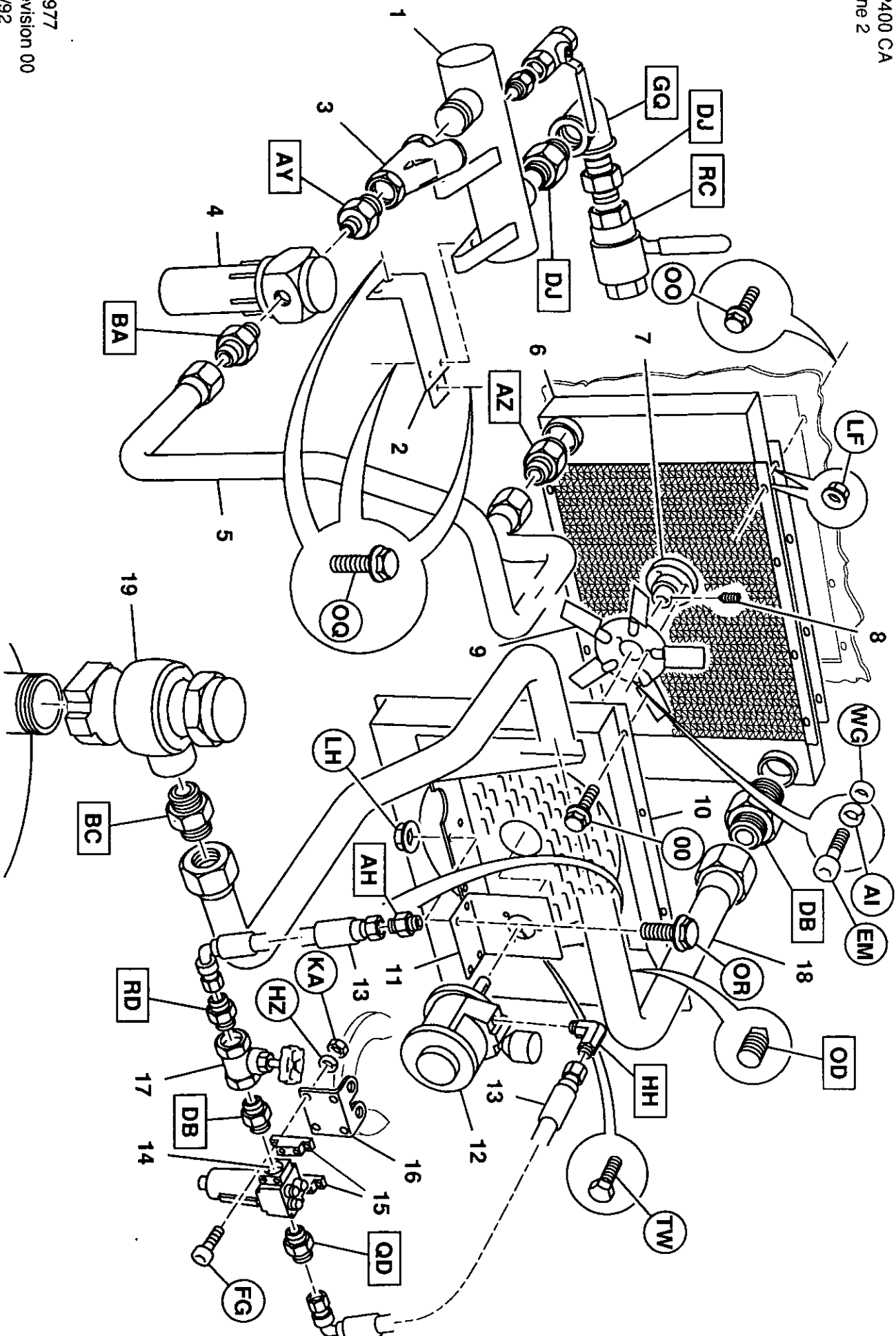
7.6.15 COOLING SYSTEM KØLESYSTEM

7.6.16

COOLING SYSTEM

KØLESYSTEM

HP400 CA
Zone 2



	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92911619	1	Manifold	Manifold
	2	92911627	1	Bracket	Beslag
	3	92546290	1	Valve, check	Kontrolventil
	4	91112185	1	Separator, water	Vandudlader
	5	92909118	1	Pipe	Rør
	6	92895051	1	Aftercooler	Oftekøler
	7	92904202	1	Hub	Nav
	8	92117761	1	Screw, Grub	Govindtap
	9	92817824	1	Fan	Ventilator
	10	92902337	1	Shroud	Beklædning
	11	92714690	1	Bracket	Beslag
	12	01204015	1	Motor	Motor
	13	92049097	2	Hose	Slange
	14-16	92679133	1	Lubricator assy	Tilbehør
	*14	92754100	1	Kit - Port block	KIT - Gennemgangsblok
	15	92754118	1	Kit - Wall mounting	KIT - Vægmontering
	16	92912104	1	Bracket	Beslag
	17	92043116	1	Valve, check	Kontrolventil
	18	92901198	1	Pipe	Rør
	19	92547819	1	Valve, minimum pressure	Trykventil minimum

Revision 01
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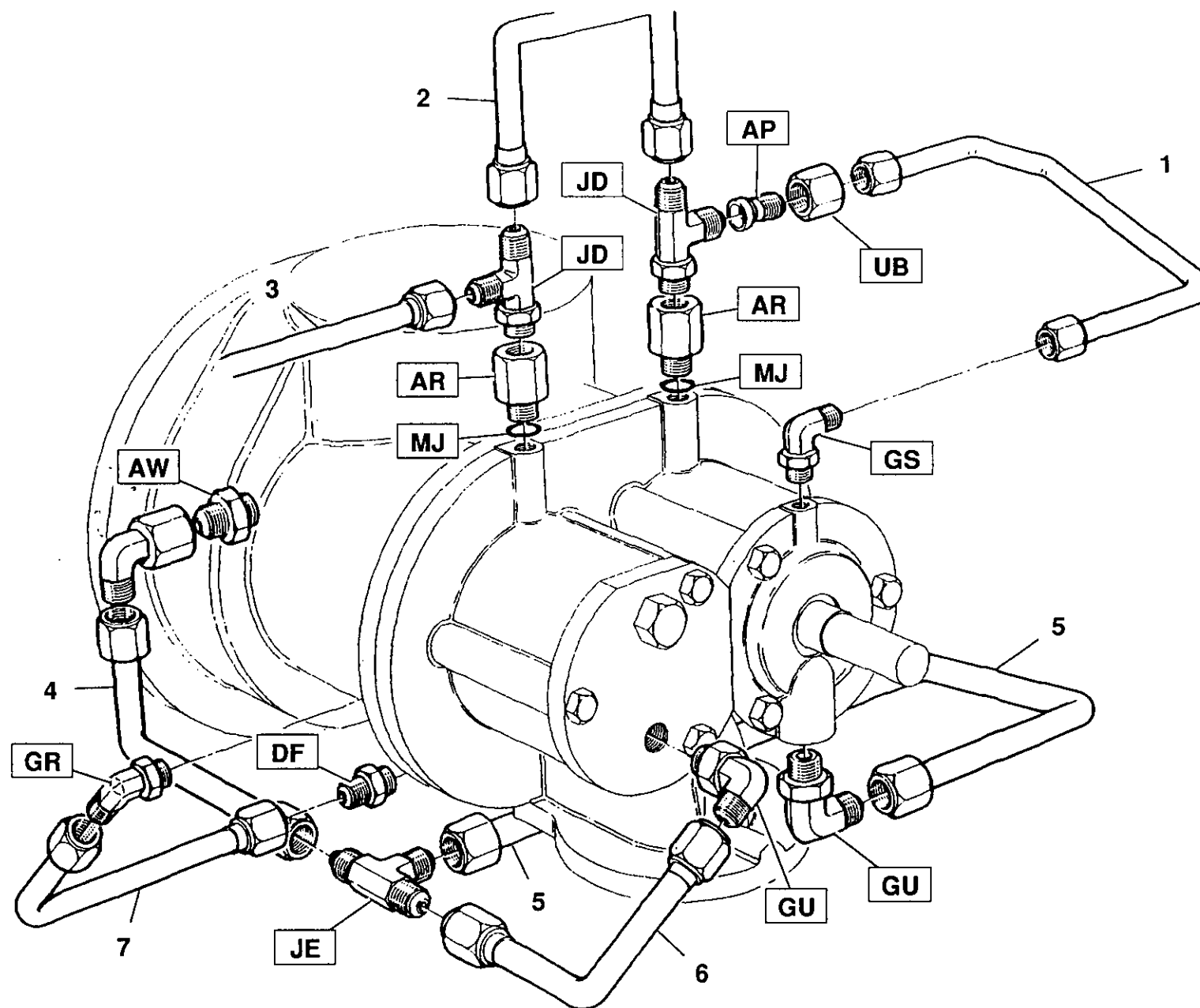
7.6.17 COOLING SYSTEM KØLESYSTEM

7.6.18

COOLING SYSTEM

KØLE SYSTEM

HP400 CA
Zone 2



T1435
Revision 00
06/92

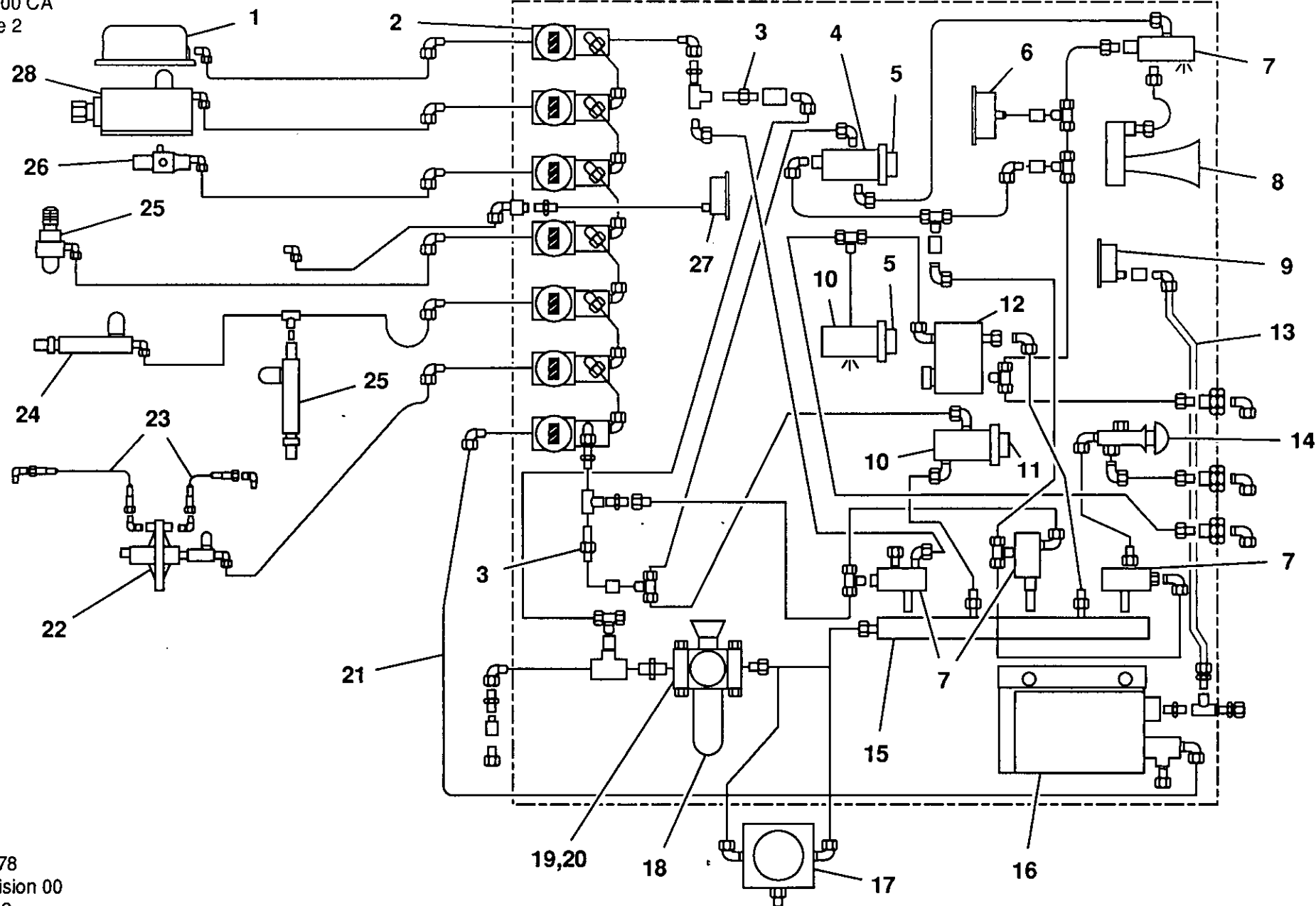
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92657113	1	Tube assembly	Rør
	2	92657105	1	Tube assembly	Rør
	3	92528116	1	Tube assembly	Rør
	4	92522705	1	Tube assembly	Rør
	5	92083252	1	Tube assembly	Rør
	6	92679224	1	Tube assembly	Rør
	7	92657097	1	Tube assembly	Rør
Revision 01 06/92					
7.6.19 COOLING SYSTEM KØLESYSTEM					

7.7.0

CONTROL & MONITORING SYSTEM - SAFETY CIRCUIT SCHEMATIC

SIKKERHEDSKREDS - SKEMATISK

HP400 CA
Zone 2



T1978
Revision 00
06/92

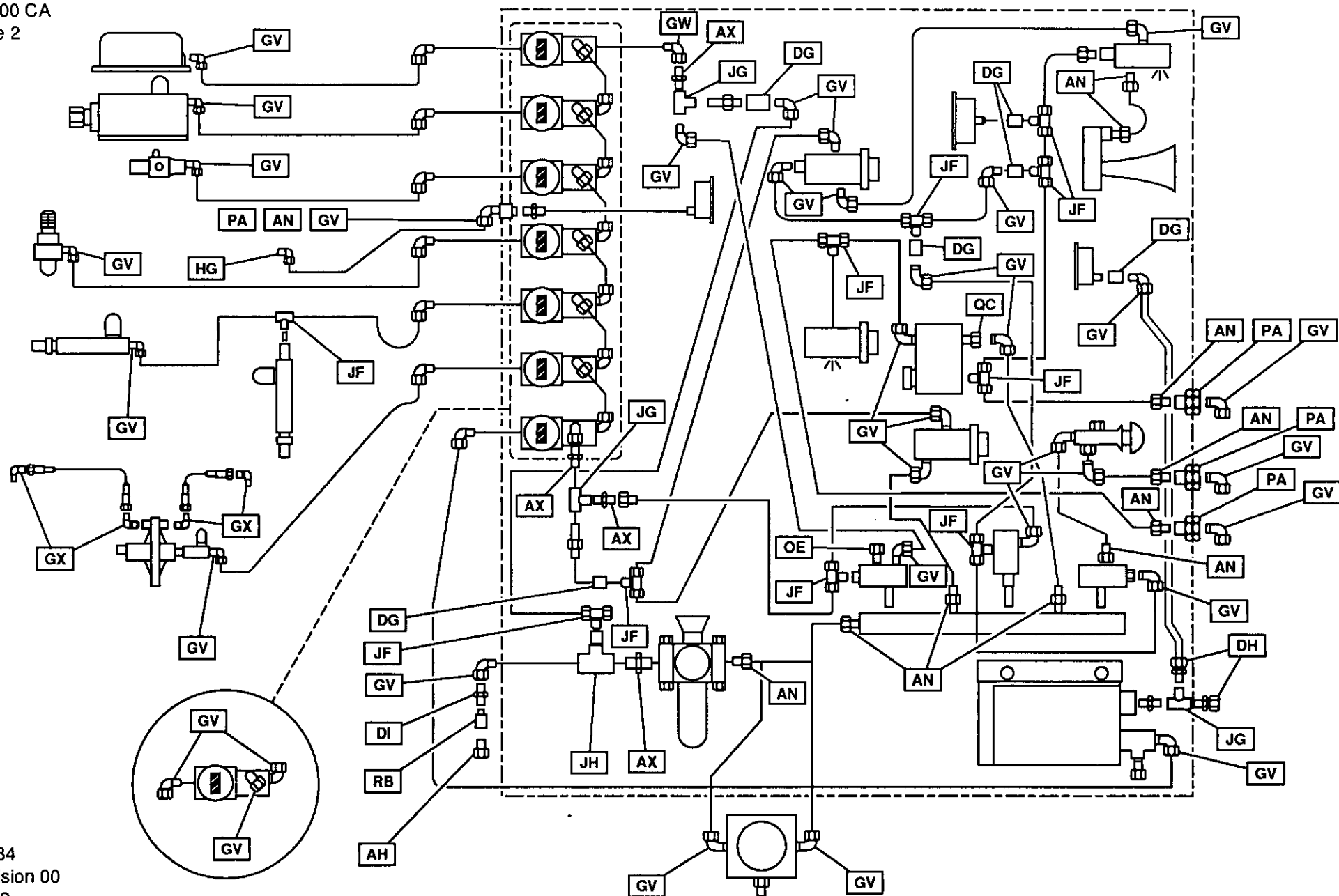
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92546761	1	Valve	Ventil
	2	92657303	7	Relay	Relæ
	3	92547777	2	Valve, check	Kontrolventil
	4	92681014	1	Valve, spool	Spoleventil
	5	92686856	2	Pushbutton	Trykknapp
	6	32790187	1	Gauge, pressure	Manometer
	7	92547736	4	Valve, pilot	Pilot ventil
	8	92661867	1	Horn	Horn
	9	92721422	1	Gauge, pressure	Manometer
	10	92681006	2	Valve, spool	Spoleventil
	11	92681022	1	Pushbutton	Trykknapp
	12	92546779	1	Valve, fuel	Brændstofventil
	13	92902113	1	Tube assembly	Rør
	14	03517232	1	Valve	Ventil
	15	92919737	1	Manifold	Manifold
Revision 01 06/92					

7.7.2

CONTROL & MONITORING SYSTEM - SAFETY CIRCUIT SCHEMATIC

SIKKERHEDSKREDS - SKEMATISK

HP400 CA
Zone 2



T1984
Revision 00
06/92

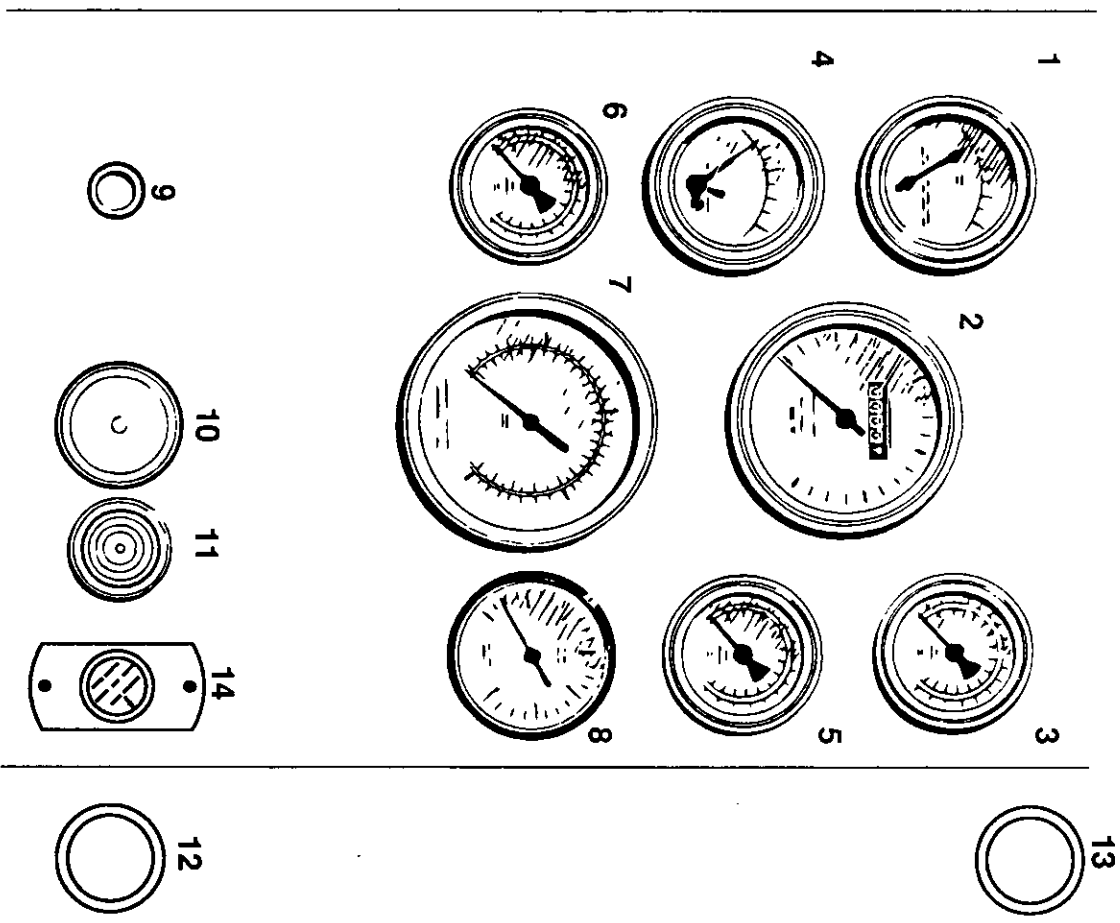
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	16	92657444	1	Valve, oil pressure	Olietryksventil
	17	92677475	1	Harness, Yellow alert 24V	Gul alarm 24V
		92662329	1	Harness, Yellow alert 110V	Gul alarm 110V
	18	92547769	1	Filter/Regulator	Regulerings filter
	19	92661768	1	Kit – Port block	KIT – Gennemgangsblok
	20	92661776	1	Kit – Wall mounting	KIT – Vægmontering
	21	92799378	1	Tube (Nylon)	Nylon slange
	22	92657410	1	Valve, water loss	Vandtabs ventil
	23	92100924	1	Hose assembly	Slange
	24	92546464	1	Probe	Probe
	25	92546472	1	Probe	Probe
	26	92546480	1	Probe	Probe
	27	92870617	1	Gauge, pressure	Manometer
	28	92546753	1	Valve	Ventil
Revision 01 06/92					
7.7.3		SAFETY CIRCUIT		SIKKERHEDSKREDS	
		– SCHEMATIC		– SKEMATISK	

7.7.4

INSTRUMENT PANEL

INSTRUMENT PANEL

HP400 CA
Zone 2



	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92721448	1	Gauge, temperature	Termometer
	2	92293497	1	Gauge, RPM	Omdrejningstæller
	3	92721422	1	Gauge, pressure	Manometer
	4	92721430	1	Gauge, temperature	Termometer
	5	92790187	1	Gauge, pressure	Manometer
	6	92870617	1	Gauge, pressure	Manometer
	7	92698240	1	Gauge, pressure	Manometer
	8	92698257	1	Gauge, temperature	Termometer
	9	35583210	1	Valve	Ventil
	10	03517232	1	Valve	Ventil
	11	92681022	1	Pushbutton	Trykknapp
	12	92686856	1	Pushbutton	Trykknapp
	13	92686856	1	Pushbutton	Trykknapp
	14	92546779	1	Valve	Ventil
				Refer to pages 2.1 & 2.3 for complete descriptions.	Se side 2.1 & 2.3 for komplet beskrivelse

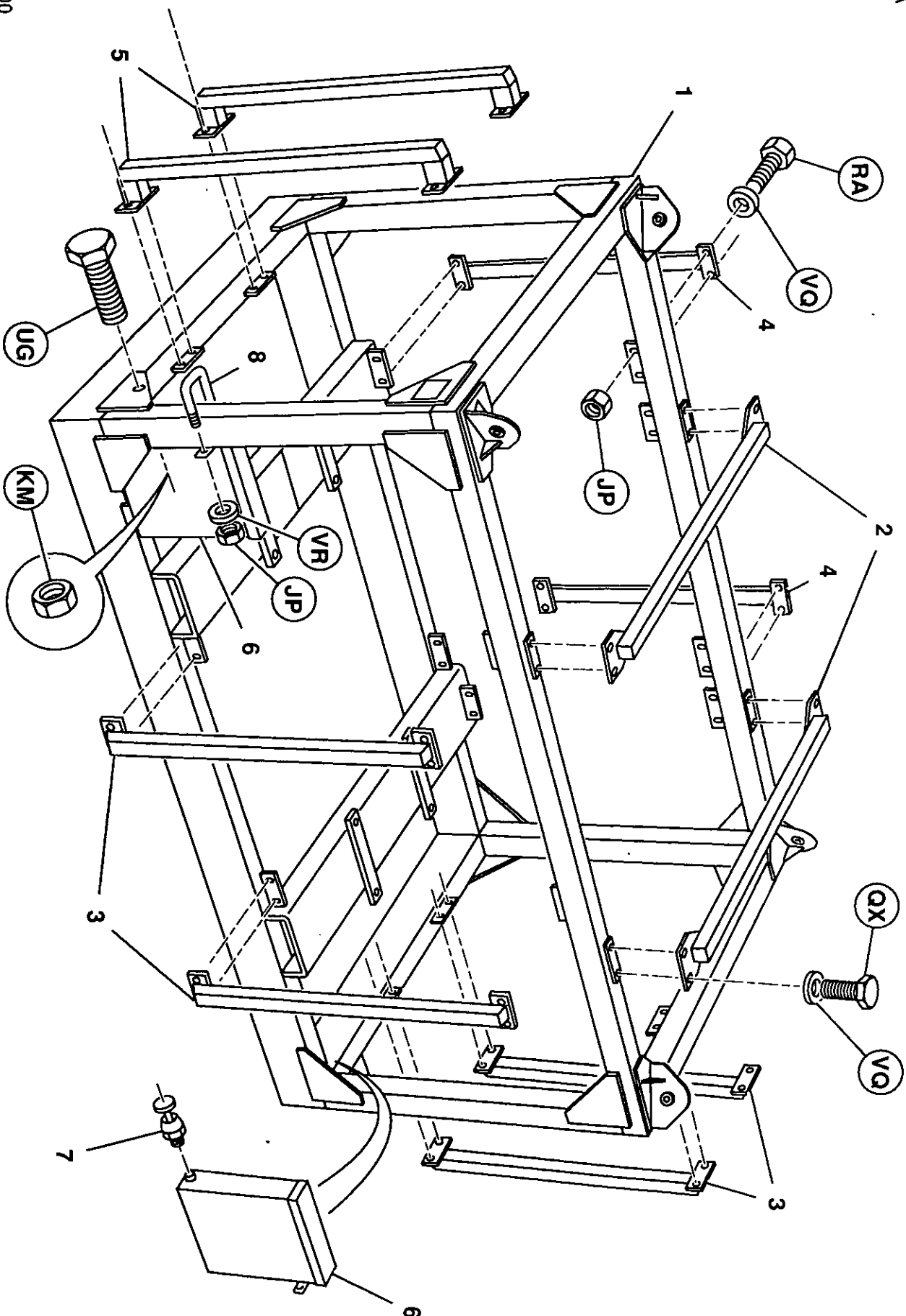
Revision 01
06/92

7.8.0

LIFTING CRADLE

LØFTERAMME

HP400 CA
Zone 2



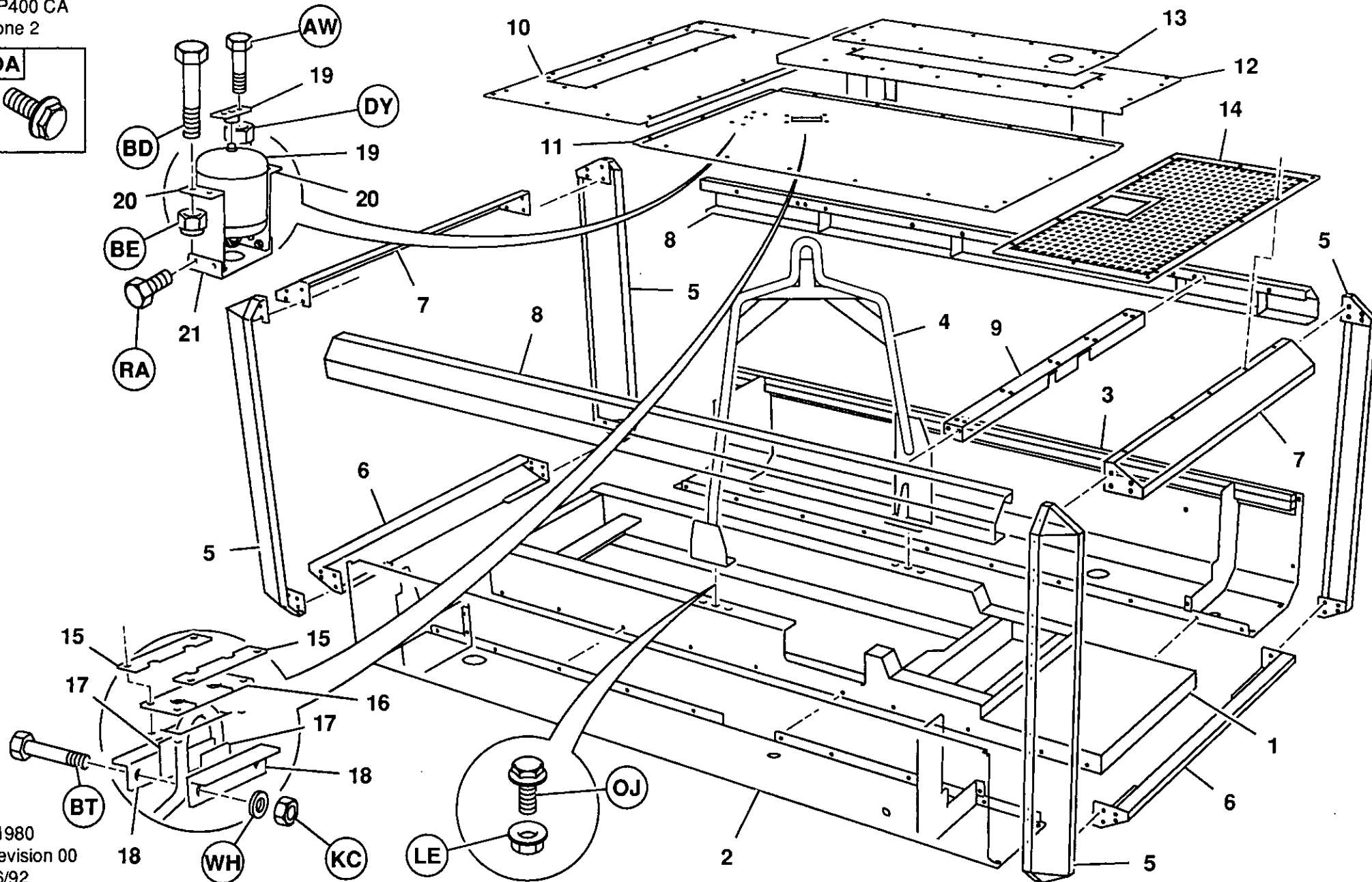
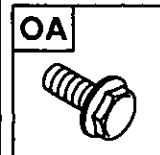
	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92870179	1	Cradle, lifting	Løfteramme
	2	92895564	2	Protector	Beskyttelsesbeslag
	3	92895499	4	Protector	Beskyttelsesbeslag
	4	92911882	2	Protector	Beskyttelsesbeslag
	5	92911700	2	Protector	Beskyttelsesbeslag
	6	92657725	2	Tank	Tank
	7	92257344	2	Plug	Prop
	8	92549328	2	Bolt	Bolt
Revision 01 06/92					
7.8.1 LIFTING CRADLE LØFTERAMME					

7.8.2

ENCLOSURE & LIFTING BAIL

AFSKÆRMNING & LØFTUDLØSER

HP400 CA
Zone 2



T1980
Revision 00
06/92

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92870369	1	Subframe	Hjælperamme
	2	92870211	1	Panel	Panel
	3	92870203	1	Panel	Panel
	4	92898584	1	Bail, lifting	Udløser for løft
	5	92870393	5	Cap, end	Dæksel ende
	6	92910462	2	Cap, end	Dæksel ende
	7	92910454	2	Cap, end	Dæksel ende
	8	92910298	2	Panel	Panel
	9	92899434	1	Support	Beslag
	10	92902170	1	Panel	Panel
	11	92902188	1	Panel	Panel
	12	92901180	1	Panel	Panel
	13	92902345	1	Cover	Dæksel
	14	92895747	1	Grille	Rist
	15	92101880	2	Plate, cover	Dæk plade
	16	92930122	1	Seal	Tætning
	17	92085711	2	Shim	Shims
	18	92930114	2	Bracket	Beslag
	19	92548833	1	Extinguisher, fire	Brandslukker
	20	92708775	2	Bracket	Beslag
	21	92708783	1	Bracket	Beslag
Revision 01 06/92					

7.8.3

**ENCLOSURE &
LIFTING BAIL**

**AFSKÆRMNING &
LØFTUDLØSER**

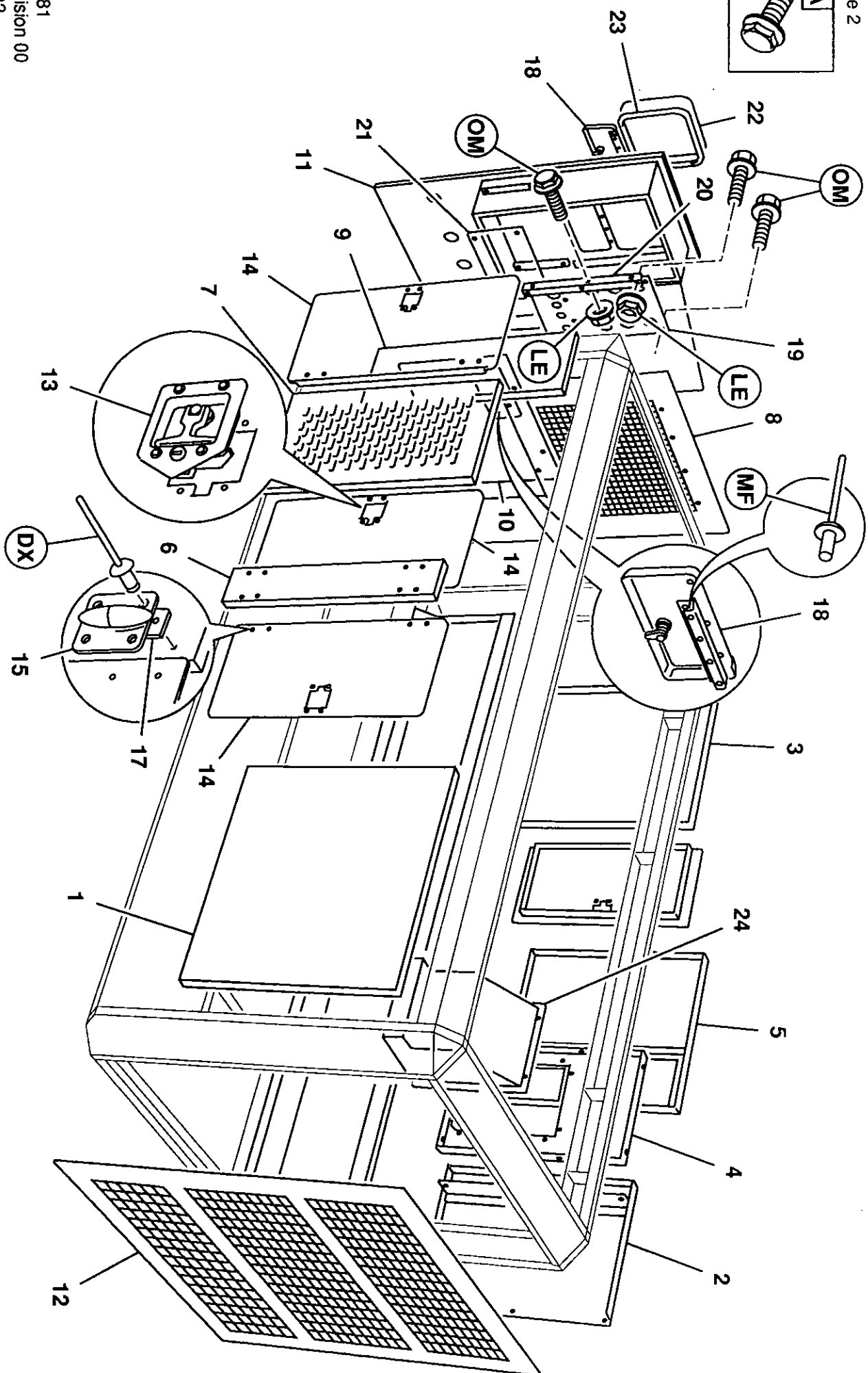
7.8.4

ENCLOSURE

AFSKÆRMNING

HP400 CA
Zone 2

OA



	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92893007	1	Panel	Panel
	2	92892876	1	Panel	Panel
	3	92895218	1	Panel	Panel
	4	92911585	1	Panel	Panel
	5	92911593	1	Panel	Panel
	6	92895390	1	Panel	Panel
	7	92895465	1	Panel	Panel
	8	92895754	1	Panel	Panel
	9	92895531	1	Panel	Panel
	10	92910645	1	Plate, cover	Dæk plade
	11	92870245	1	Panel	Panel
	12	92895903	1	Panel	Panel
	13	92757079	4	Latch	Lås
	14	92540277	4	Door	Dør
	15	92540699	2	Hinge	Hængsel
	*16	92540285	6	Hinge	Hængsel
	17	92540582	8	Spacer	Afstandsskive
	18	92056761	2	Door assembly	Monteringssæt, dør
	19	92870351	1	Fascia	Instrumentbord
	20	92911023	1	Bracket	Beslag
	21	92895101	1	Plate	Plade
	22	92809250	1	Window	Vindue
	23	35251800	1	Seal	Tætning
Revision 01 06/92	24	92908938	1	Box	Kasse

7.8.5

ENCLOSURE

AFSKÆRMNING

7.9.0

DECALS – INTERNAL

TRANSFERS – INDVENDIG

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92900950	1	Set, internal decals (GB)	Indvendig transfer sæt
	2	92754001	1	Decal, use Dexron	Transfer, brug Dexron
	3	92660943	1	Decal, air filter restriction	Transfer, luft filter spæring
	4	92662139	2	Decal, oil level	Transfer, olie niveau
	5	92660950	1	Decal, engine oil filler	Transfer, motor oliefilter
	6	92660968	1	Decal, engine oil dipstick	Transfer, oliepind
	7	92909316	1	Decal, general data	Transfer, maskindata

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1	92900968	1	Set, external decals (GB)	Udvendig, transfer sæt
	2	92919067	1	Decal, specification	Transfer, specifikation
	3	92548692	1	Decal, warning restart	Transfer, genstart advarsel
	4	92548700	1	Decal, operating instructions	Transfer, brugs instruktioner
	5	92548718	1	Decal, daily service routine	Transfer, dag service
	6	92548726	1	Decal, fill radiator here	Transfer, kølerpåfyldning
	7	92548734	1	Decal, radiator filler	Transfer, kølerpåfyldning
	8	92548742	1	Decal, Fuel filler	Transfer, brædstopåfyldning
	9	92548759	1	Decal, water separator drain	Transfer, vand seperator dræn
	10	92548767	1	Decal, engine oil drain	Transfer, motorolie dræn
	11	92548783	1	Decal, air start receiver	Transfer, luftstart tank
	12	92548791	1	Decal, radiator drain	Transfer, køler dræn
	13	92548809	1	Decal, compressor oil drain	Transfer, kompressor olie dræn
	14	92919075	1	Decal, exhaust flame arrestor	Transfer, flammeskærm udstødning
	15	92757386	1	Decal, very important	Transfer, meget vigtigt
	16	92657394	1	Decal, stop reset	Transfer, stop reset
	17	92919083	1	Decal, indicator relays	Transfer, indikator for relæer
	18	92660919	1	Decal, overspeed valve reset	Transfer, overspeed ventil reset
	19	92660935	1	Decal, vibration valve reset	Transfer, vibrations ventil reset
	20	92777838	1	Decal, top up lube daily	Transfer, efterfyld dagligt
	21	92660976	1	Decal, safety circuit reset	Transfer, sikkerheds kreds reset
	22	92548734	1	Decal, radiator filler	Transfer, kølerpåfyldning
	23	92902444	2	Decal, Gross weight	Transfer, Max. vægt
Revision 01 06/92					
7.9.1 DECALS – EXTERNAL				TRANSFERS – UDVENDIG	

8.0

RECOMMENDED PARTS

ANBEFALEDE DELE

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1-7	92815471	1	Filter service kit	Filter kit – service
	1	92686922	1	Element, air filter	Luftfilterelement
	2	92686930	1	Element, air filter	Luftfilterelement
	3	92686948	1	Element, air filter	Luftfilterelement
	4	92686955	1	Element, air filter	Luftfilterelement
	5	92118678	2	Element, oil filter	Oliefilterelement
	6	92815497	1	Element, fuel filter	Brændstoffilterelement
	7	92815489	1	Element, oil filter	Oliefilterelement
	1-15	92542943	1	Kit, Airend overhaul	Kit for luftende
	1	39437595	4	Bearing	Leje
	2	35313543	1	Bearing	Leje
	3	35313535	1	Bearing	Leje
	4	35313568	1	Bearing	Leje
	5	35327543	1	Bearing	Leje
	6	35518497	1	Gasket, Front bearing housing	Pakning, lejehus, front
	7	39437629	1	Gasket, Rear bearing housing	Pakning, lejehus, bag
	8	39437637	1	Gasket, Gearcase	Pakning, gearkasse
	9	95060224	2	'O' Ring, Rear bearing cover	O-Ring, bagerste lejehus dæksel
	10	95358024	1	'O' Ring, Oil seal cover	O-Ring, olietætning dæksel
	11	35593490	1	Seal, front	Tætning
	12	35598556	1	Seal, rear	Tætning
	13	35313600	4	Set, shim	Sæt , shims
	14	35313618	4	Set, shim	Sæt , shims
	15	92679323	2	Set, shim	Sæt , shims

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	1-24	92942705	1	Gasket set	Pakningssæt
	1	92517846	2	Gasket, Spark arrestor	Pakning
	2	92924224	1	Gasket, Exhaust cooler	Pakning
	3	92924216	1	Gasket, Exhaust cooler	Pakning
	4	39437637	1	Gasket, Gearcase	Pakning
	5	95358024	1	'O' Ring, Oil seal cover	O-Ring
	6	35518497	1	Gasket, Front bearing housing	Pakning
	7	39437629	1	Gasket, Rear bearing housing	Pakning
	8	95060224	2	'O' Ring, Rear bearing cover	O-Ring
	9	35588300	1	Gasket, Unl. piston housing	Pakning
	10	35278589	1	'O' Ring, Unloader	O-Ring
	11	35588318	1	Gasket, Unloader	Pakning
	12	35589589	1	Gasket, Unloader	Pakning
	13	92546498	1	Gasket, Overspeed valve	Pakning
	14	92896091	1	'O' Ring, Overspeed valve	O-Ring
	15	35275908	1	Gasket, Airend oil manifold	Pakning
	16	92095413	2	'O' Ring, Oil level gauge	O-Ring
	17	92095421	2	'O' Ring, Oil level gauge	O-Ring
	18	92293661	4	Seal, Oil level gauge	Tætning
	19	35279942	1	'O' Ring, Oil filler plug	O-Ring
	20	92547801	2	Gasket, Separator element	Pakning
	21	92707538	1	Gasket, Bypass valve	Pakning
	22	30549919	1	Gasket, Bypass valve	Pakning
	23	35575570	1	Gasket, Bypass valve	Pakning
	24	92676667	1	Gasket, Bypass valve	Pakning

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8.1

**RECOMMENDED
PARTS**

**ANBEFALEDE
DELE**

8.2

RECOMMENDED PARTS

ANBEFALEDE DELE

ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2				
1-38	92942713	1	Kit - Service	Service - kit
1	92887009	1	Belt, drive	Drivrem
2	92120013	1	Cap, fuel filler	Top, brændstoftank
3	35317197	1	Diaphragm	Membran
4	92686922	1	Element, air filter	Luftfilterelement
5	92686930	1	Element, air filter	Luftfilterelement
6	92686948	1	Element, air filter	Luftfilterelement
7	92686955	1	Element, air filter	Luftfilterelement
8	92419290	1	Indicator	Indikator
9	92294461	1	Valve, hand	Håndventil
10	35322379	1	Valve, blowdown	Blow down ventil
11	92041664	1	Cap, radiator	Køler dæksel
12	92101054	1	Valve, check	Kontrolventil
13	92702554	1	Gauge, oil level	Oliveniveau måler
14	92699198	1	Element, separator	Filter element
15	92118678	2	Element, oil filter	Oliefilterelement
16	92547231	1	Valve, safety	Sikkerheds ventil
17	35288117	1	Valve, oil temperature	Olietemperatur ventil
18	92721448	1	Gauge, water temperature	Vandtemperatur måler
19	92293497	1	Hournmeter / tachometer	Timetæller
20	92721422	1	Gauge, oil pressure	Olietryks måler
21	92721430	1	Gauge, oil temperature	Olietemperatur måler
22	92790187	1	Gauge, Air start pressure.	Manometer

	ITEM	CPN	Qty	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	23	92870617	1	Gauge, pressure, Safety	Manometer
	24	92698240	1	Gauge, pressure, Disch. Press.	Manometer
	25	92698257	1	Gauge, temp. Exhaust	Termometer
	26	35583210	1	Valve, Two way	To vejs ventil
	27	03517232	1	Valve, Manual air start	Ventil for manuel luftstart
	28	92681022	1	Pushbutton, Green, reset	Trykknop
	29	92686856	1	Pushbutton, Black, stop	Trykknop
	30	92546779	1	Valve, override	Omstyringsventil
	31	92909332	1	Cable, Tachometer drive	Drev for omdrejningstæller
	32	92681006	1	Valve, spool	Spoleventil
	33	92657303	1	Relay, Indicating	Relæ
	34	92549278	1	Silencer	Lyddæmper
	35	35359090	1	Regulator, pressure	Regulator
	36	92549211	1	Orifice, silencer	Åbning for lyddæmper
	37	92815489	1	Element, oil filter	Oliefilterelement
	38	92815497	1	Element, fuel filter	Brændstoffilterelement
Revision 01 06/92 8.3 RECOMMENDED PARTS ANBEFALEDE DELE					

9.0

INDEX – FASTENERS

INDEKS – BOLTE OG METRIK

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	AA	35108372	7.3.0,7.3.2	Bolt 1/2" x 1 1/4" UNC	Bolt 1/2" x 1 1/4" UNC
	AB	35104108	7.3.6	Bolt 3/8" x 1 1/4" UNC	Bolt 3/8" x 1 1/4" UNC
	AI	39155239	7.6.16	Bolt M10 x 60	Bolt M10 x 60
	AM	92359355	7.0.0,7.0.2	Bolt M10 x 75	Bolt M10 x 75
	AW	92475987	7.8.2	Bolt M12 x 70	Bolt M12 x 70
	AX	92398171	7.6.12,7.6.14	Bolt M12 x 75	Bolt M12 x 75
	AZ	92367655	7.6.4	Bolt M12 x 90	Bolt M12 x 90
	BD	92419886	7.8.2	Bolt M16 x 110	Bolt M16 x 110
	BE	92174101	7.8.2	Bolt M16 x 180	Bolt M16 x 180
	BJ	92531409	7.3.0,7.3.2	Bolt M20 x 110	Bolt M20 x 110
	BM	92391358	7.0.0,7.0.2	Bolt M20 x 90	Bolt M20 x 90
	BR	40014888	7.4.0	Bolt M8 x 60	Bolt M8 x 60
	BT	92488733	7.8.2	Bolt M8 x 70	Bolt M8 x 70
	CH	92764372	7.4.0	Bolt M20 x 80	Bolt M20 x 80
	CW	50921725	7.0.0,7.0.2	Bolt M10 x 40	Bolt M10 x 40
	DL	35321595	7.3.8	Capscrew Skt. Hd. M10 x 16	Sætskrue undersænket M10 x 16
	DX	35287655	7.8.4	Capscrew Skt. Hd. M10 x 25	Sætskrue undersænket M10 x 25
	DY	92465590	7.6.10	Capscrew Skt. Hd. M10 x 25	Sætskrue undersænket M10 x 25
	EM	92421403	7.6.16	Capscrew Skt. Hd. M6 x 20	Sætskrue undersænket M6 x 20
	EP	35327550	7.3.0,7.3.2	Capscrew Skt. Hd. M8 x 80	Sætskrue undersænket M8 x 80

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	FG	92421304	7.6.16	Capscrew Skt. Hd. M5 x 15	Sætskrue undersænket M5 x 15
	FH	92421429	7.4.0	Capscrew Skt. Hd. M8 x 30	Sætskrue undersænket M8 x 30
	FL	35271188	7.3.0,7.3.2	Capscrew Skt. Hd. M10 x 25	Sætskrue undersænket M10 x 25
	GF	35294578	7.6.12,7.6.14	Locknut M24	Låsemøtrik M24
	HI	92061332	7.4.2	Lockwasher M10	Låseskive M10
	HL	92304674	7.4.2	Lockwasher M10	Låseskive M10
	H.N	92061472	7.6.12,7.6.14	Lockwasher M12	Låseskive M12
	HO	92304682	7.3.0,7.3.2,7.6.2 7.6.4,7.6.10	Lockwasher M12	Låseskive M12
	HP	92329325	7.4.0	Lockwasher M12	Låseskive M12
	HR	92081504	7.4.0	Lockwasher M16	Låseskive M16
	HS	92359371	7.6.10	Lockwasher M16	Låseskive M16
	HZ	92304641	7.6.16	Lockwasher M5	Låseskive M5
	ID	92304666	7.4.0	Lockwasher M8	Låseskive M8
	II	92304674	7.3.0,7.3.2,7.6.6 7.6.10,7.6.12, 7.6.14	Lockwasher M10	Låseskive M10
	JA	92823392	7.6.12,7.6.14	Nut M10	Møtrik M10
	JP	92304526	7.6.12,7.6.14, 7.8.0	Nut M10	Møtrik M10
	JQ	35147529	7.1.0	Nut M12	Møtrik M12
Revision 01 06/92					
9.1		INDEX – FASTENERS		INDEKS – BOLTE OG METRIK	

9.2

INDEX – FASTENERS

INDEKS – BOLTE OG METRIK

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	JR	90103854	7.6.2,7.6.12 7.6.14	Nut M12	Møtrik M12
	JS	92063791	7.4.0	Nut M12	Møtrik M12
	JU	90103839	7.3.8	Nut M16	Møtrik M16
	JX	92700590	7.3.0,7.3.2	Nut M20	Møtrik M20
	KA	92304492	7.6.16	Nut M5	Møtrik M5
	KB	92304500	7.0.0,7.0.2	Nut M6	Møtrik M6
	KC	92100568	7.6.12,7.6.14 7.8.2	Nut M8	Møtrik M8
	KD	92304518	7.4.0	Nut M8	Møtrik M8
	KL	92173731	7.1.0	Nut Brass M12	Møtrik M12
	KM	92657261	7.8.0	Nut Brass M16	Møtrik 1/2" x 1 1/4" UM16
	KR	92304567	7.0.0,7.0.2,7.4.0 7.4.2	Nut Self locking M10	Møtrik M10
	KS	92304575	7.6.12,7.6.14	Nut Self locking M12	Møtrik M12
	LD	92473594	7.4.0	Nut M10 Whiztite	Møtrik M10 Whiztite
	LE	92398643	7.8.2,7.8.4	Nut M12 Whiztite	Møtrik M12 Whiztite
	LF	92398106	7.6.16	Nut M6 Whiztite	Møtrik M6 Whiztite
	LG	92398114	7.6.6	Nut M8 Whiztite	Møtrik M8 Whiztite
	LM	92304542	7.0.0,7.0.2	Nut M6 Nyloc	Møtrik M6 Nyloc
	MF	92281369	7.8.4	Rivet 5/32" x 1/2"	Nitte 5/32" x 1/2"
	MV	92304443	7.1.0	Setscrew M12 x 40	Sætskrue M12 x 40

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	NA	92359725	7.3.6	Screw 5/16" x 1/4"	Skrue 5/16" x 1/4"
	OA	92368687	7.4.2	Screw Taptite M6 x 12	Skrue Taptite M6 x 12
	OF	92472638	7.4.0	Screw Whizlock M10 x 20	Skrue Whizlock M10 x 20
	OG	92473586	7.0.0,7.0.2	Screw Whizlock M10 x 25	Skrue Whizlock M10 x 25
	OI	92176114	7.0.0,7.0.2	Screw Whizlock M12 x 20	Skrue Whizlock M12 x 20
	OJ	92398627	7.8.2	Screw Whizlock M12 x 30	Skrue Whizlock M12 x 30
	OM	92184811	7.8.4	Screw Whizlock M6 x 12	Skrue Whizlock M6 x 12
	OO	92398122	7.6.16	Screw Whizlock M6 x 20	Skrue Whizlock M6 x 20
	OQ	92398130	7.6.12,7.6.14 7.6.16	Screw Whizlock M8 x 20	Skrue Whizlock M8 x 20
	OR	92101112	7.6.12,7.6.14	Screw Whizlock M8 x 35	Skrue Whizlock M8 x 35
	QV	92329309	7.4.2	Setscrew M10 x 35	Sætskrue M10 x 35
	QX	92304393	7.8.0	Setscrew M10 x 20	Sætskrue M10 x 20
	QZ	92304401	7.1.0,7.3.8 7.6.6	Setscrew M10 x 25	Sætskrue M10 x 25
	RA	92280981	7.3.0,7.3.2 7.6.12,7.6.14 7.8.0,7.8.2	Setscrew M10 x 30	Sætskrue M10 x 30
	RC	92304427	7.6.12,7.6.14	Setscrew M10 x 50	Sætskrue M10 x 50
	RE	92304435	7.0.0,7.1.0 7.6.12,7.6.14	Setscrew M12 x 35	Sætskrue M12 x 35
Revision 01 06/92					
9.3 INDEX – FASTENERS INDEKS – BOLTE OG METRIK					

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INDEX – FASTENERS

INDEKS – BOLTE OG METRIK

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	RF	90103185	7.1.0,7.3.0 7.3.2,7.6.10 7.6.12,7.6.14	Setscrew M12 x 30	Sætskrue M12 x 30
	RH	92280973	7.3.6,7.4.0 7.6.12,7.6.14	Setscrew M12 x 35	Sætskrue M12 x 35
	RI	92304450	7.6.2	Setscrew M12 x 50	Sætskrue M12 x 50
	RM	92472927	7.4.0	Setscrew M14 x 35	Sætskrue M14 x 35
	RP	35300623	7.3.0,7.3.2	Setscrew M16 x 40	Sætskrue M16 x 40
	RR	92081470	7.1.0	Setscrew M16 x 30	Sætskrue M16 x 30
	RT	92280940	7.3.4,7.3.6 7.6.6,7.6.10	Setscrew M16 x 40	Sætskrue M16 x 40
	SL	92304336	7.3.8	Setscrew M8 x 16	Sætskrue M8 x 16
	SM	92304344	7.0.0,7.4.2 7.6.12,7.6.14	Setscrew M8 x 20	Sætskrue M8 x 20
	TF	92419282	7.6.12,7.6.14	Setscrew M8 x 50	Sætskrue M8 x 50
	TW	95251229	7.6.16	Screw 1/4" x 3/4" UNC	Skrue 1/4" x 3/4" UNC
	UE	92304443	7.6.12,7.6.14	Setscrew M12 x 40	Sætskrue M12 x 40
	UG	92657279	7.8.0	Screw Brass M16 x 60	Skrue M16 x 60
	VP	92061498	7.0.0,7.0.2 7.3.0,7.3.2 7.4.2	Washer M10	Skive M10

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	VQ	92304617	7.8.0	Washer M10	Skive M10
	VR	92329283	7.6.6,7.6.12 7.6.14,7.8.0	Washer M10	Skive M10
	VS	92535285	7.1.0	Washer M10	Skive M10
	VT	92061506	7.0.0,7.3.0 7.3.2,7.3.6 7.6.2,7.6.12 7.6.14	Washer M12	Skive M12
	VW	92329341	7.1.0,7.4.0 7.6.12,7.6.14	Washer M12	Skive M12
	VX	92304633	7.4.0	Washer M14	Skive M14
	VZ	92359363	7.1.0,7.6.6	Washer M16	Skive M16
	WB	92391382	7.3.0,7.3.2 7.4.0	Washer M20	Skive M20
	WG	92341981	7.6.16	Washer M16	Skive M16
	WH	92061480	7.8.2	Washer M8	Skive M8
	WI	92304609	7.0.0,7.4.0,7.4.2	Washer M8	Skive M8
	XC	95069571	7.0.0	Washer 3/4"	Skive 3/4"
	XR	92757632	7.3.4,7.3.6	Washer M16	Skive M16
Revision 01 06/92					
9.5		INDEX – FASTENERS		INDEKS – BOLTE OG METRIK	

9.6

INDEX – TUBE FITTINGS

INDEKS – SLANGEFITTINGS

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	AB	35283076	7.6.4	Adaptor	Adapter
	AF	92086396	7.6.8	Adaptor	Adapter
	AH	92478387	7.6.2 7.6.16 7.7.2	Adaptor	Adapter
	AN	92029651	7.7.2	Adaptor	Adapter
	AP	92394295	7.6.4 7.6.18	Adaptor	Adapter
	AQ	92173780	7.6.4	Adaptor	Adapter
	AR	92420058	7.6.4 7.6.18	Adaptor	Adapter
	AS	35287903	7.6.4	Adaptor	Adapter
	AV	92086487	7.6.8	Adaptor	Adapter
	AW	35288166	7.6.18	Adaptor	Adapter
	AX	92415363	7.7.2	Adaptor	Adapter
	AY	92909001	7.6.16	Adaptor	Adapter
	AZ	92795797	7.6.16	Adaptor	Adapter
	BA	92087840	7.6.16	Adaptor	Adapter
	BC	92756382	7.6.16	Adaptor	Adapter
	BD	92478270	7.2.0	Adaptor	Adapter
	DB	92354554	7.6.16	Connector	Forbindelsesnippel
	DF	92478502	7.6.18	Connector	Forbindelsesnippel
	DG	92258110	7.6.6 7.7.2	Connector	Forbindelsesnippel
	DH	92479666	7.7.2	Connector	Forbindelsesnippel
	DI	92005701	7.7.2	Connector	Forbindelsesnippel
	DJ	92255942	7.6.16	Connector	Forbindelsesnippel

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	DL	92087840	7.6.8	Connector	Forbindelsesnippel
	DM	92395540	7.6.8	Connector	Forbindelsesnippel
	DO	92354687	7.5.0	Connector	Forbindelsesnippel
	DP	92354620	7.1.2 7.1.4	Connector	Forbindelsesnippel
	DQ	92520725	7.1.2 7.1.4	Connector	Forbindelsesnippel
	DR	35354638	7.1.2 7.1.4	Connector	Forbindelsesnippel
	DS	92185800	7.1.2 7.1.4	Connector	Forbindelsesnippel
	DT	92478262	7.1.2 7.1.4	Connector	Forbindelsesnippel
	DU	92477207	7.1.2 7.1.4	Connector	Forbindelsesnippel
	DV	92911726	7.1.2 7.1.4	Connector	Forbindelsesnippel
	GC	92086412	7.6.4	Connector	Forbindelsesnippel
	GI	92394261	7.1.2 7.1.4 7.6.2	Elbow	Vinkel
	GJ	92080811	7.6.4	Elbow	Vinkel
	GK	35279827	7.2.0 7.6.4	Elbow	Vinkel
	GL	35279835	7.6.4	Elbow	Vinkel
	GM	92087832	7.6.8	Elbow	Vinkel
	GQ	92292804	7.6.16	Elbow	Vinkel
	GR	35305622	7.6.18	Elbow	Vinkel
	GS	35279876	7.6.18	Elbow	Vinkel
	GT	35287911	7.5.0	Elbow	Vinkel
	GU	35279801	7.2.0 7.6.18	Elbow	Vinkel
	GV	92067958	7.1.2 7.1.4 7.6.6 7.7.2	Elbow	Vinkel
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HP400CA Zone 2	GW	92354505	7.7.2	Elbow	Vinkel
	GX	92395458	7.2.0 7.7.2	Elbow	Vinkel
	GY	92782911	7.6.8	Elbow	Vinkel
	GZ	92354313	7.2.0	Elbow	Vinkel
	HA	92799386	7.5.0	Elbow	Vinkel
	HB	92123207	7.5.0	Elbow	Vinkel
	HC	95219853	7.1.2 7.1.4	Elbow	Vinkel
	HD	35283464	7.1.2 7.1.4	Elbow	Vinkel
	HE	92478221	7.1.2 7.1.4	Elbow	Vinkel
	HG	92527770	7.1.2 7.1.4 7.7.2	Elbow	Vinkel
	HH	92478288	7.6.16	Elbow	Vinkel
	JC	35279868	7.6.2	Tee	Tee
	JD	35279850	7.6.18	Tee	Tee
	JE	92083245	7.6.18	Tee	Tee
	JF	92029644	7.7.2	Tee	Tee
	JG	92258714	7.7.2	Tee	Tee
	JH	92354729	7.7.2	Tee	Tee
	JI	92109825	7.2.0	Tee	Tee
	JJ	35279843	7.5.0	Tee	Tee
	JK	92478320	7.5.0	Tee	Tee
	MH	92871466	7.6.4	'O' Ring	O-Ring
	MI	92032861	7.6.4	'O' Ring	O-Ring
	MJ	95024394	7.6.4 7.6.18	'O' Ring	O-Ring

	CODE	CPN	PAGE #	DESCRIPTION	BESKRIVELSE
HP400CA Zone 2	OC	35278548	7.6.4	Plug	Prop
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	PA	92792985	7.7.2	Connector, bulkhead	Forplade forbindelse
	PB	92895309	7.1.2 7.1.4	Connector, bulkhead	Forplade forbindelse
	QC	92902089	7.7.2	Adaptor, orifice	Rørfitting
	QD	92924380	7.6.16	Adaptor, orifice	Rørfitting
	RB	92005701	7.7.2	Valve, ball	Kugle ventil
	RC	92530047	7.6.16	Valve, ball	Kugle ventil
	RD	92111228	7.16	Valve, ball	Kugle ventil
	RE	92069038	7.1.2 7.1.4 7.2.0	Valve, ball	Kugle ventil
	SB	35323542	7.3.8	Fitting, barbed	Monterings spyd
	SC	35316587	7.3.8	Fitting, barbed	Monterings spyd
	TD	92896000	7.6.8	Bush, reducing	Reduktionsbøsning
	TE	92822303	7.2.0	Bush, reducing	Reduktionsbøsning
	TF	92908490	7.2.0	Bush, reducing	Reduktionsbøsning
	TG	92716778	7.5.0	Bush, reducing	Reduktionsbøsning
	TH	92763283	7.1.2 7.1.4	Bush, reducing	Reduktionsbøsning
	UB	92394352	7.2.0 7.5.0 7.6.4 7.6.18	Nut	Møtrik
	UC	35296219	7.2.0	Nut	Møtrik
	UD	92901974	7.1.2	Nut	Møtrik
	YA	35296227	7.2.0	Reducer	Reduktion
	YB	92394295	7.2.0 7.5.0	Reducer	Reduktion
	YC	92178524	7.1.2 7.1.4	Coupling, claw	Klo kobling
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	35255827,	7.3.3	35518497,	7.3.5, 8.0, 8.1	92055235,	7.4.1, 7.4.3	92293497,	7.7.5, 8.2	92546480,	7.7.3	92658012,	7.5.1
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