

problem
pump too hot and flashing off. pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate
pump too hot and flashing off. pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate
pump too hot and flashing off. pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate
pump too hot and flashing off. pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate
pump too hot and flashing off. pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate
pump too hot and flashing off. pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate
pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate (continued)
pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate (continued)
pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate (continued)
pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate (continued)
pump churning up fluid and failing to discharge water after an initial surge, and then continuing to recirculate (continued)
heavy vibrations during the operation of the pump
heavy vibrations during the operation of the pump

heavy vibrations during the operation of the pump (continued)
heavy vibrations during the operation of the pump (continued)
heavy vibrations during the operation of the pump (continued)
heavy vibrations during the operation of the pump (continued)
heavy vibrations during the operation of the pump (continued)
heavy vibrations during the operation of the pump (continued)
heavy vibrations during the operation of the pump (continued)
capacity or pressure of the pump reduced. pump failing to deliver water
capacity or pressure of the pump reduced. pump failing to deliver water
capacity or pressure of the pump reduced. pump failing to deliver water
capacity or pressure of the pump reduced. pump failing to deliver water
capacity or pressure of the pump reduced. pump failing to deliver water
capacity or pressure of the pump reduced. pump failing to deliver water
motor using excessive power at rated temperature. motor protection relay being tripped by the pump
bearings running hot

bearings running hot
bearings running hot
bearings running hot
bearings running hot
bearings running hot
bearings running hot
bearings running hot (continued)
insufficient discharge
insufficient discharge
insufficient discharge
excessive power consumption
excessive power consumption
excessive power consumption
excessive power consumption

excessive power consumption

excessive power consumption

overheating

overheating

overheating

overheating

overheating

overheating (continued)

overheating (continued)

overheating (continued)

overheating (continued)

overheating (continued)

overheating (continued)

overheating (continued)

overheating (continued)

noisy bearing. irregular dents or material embedded in raceways

noisy bearing. irregular dents or material embedded in raceways

noisy bearing. irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

noisy bearing (continued). irregular dents or material embedded in raceways

vibration

vibration
vibration
vibration
vibration (continued)
vibration (continued)
vibration (continued)
bearing loose on the shaft
bearing loose on the shaft
bearing loose on the shaft
shaft difficult to turn by hand
shaft difficult to turn by hand
shaft difficult to turn by hand
shaft difficult to turn by hand
shaft difficult to turn by hand

angular misalignment
angular misalignment
frequent replacements
oil leakage
oil leakage
oil leakage
valve gland leakage
valve gland leakage
valve gland leakage
valve gland leakage
valve gland leakage
valve gland leakage (continued)
valve gland leakage (continued)
body to bonnet gasket leakage

body to bonnet gasket leakage
body to bonnet gasket leakage
body to bonnet gasket leakage (continued)
body to bonnet gasket leakage (continued)
body to bonnet gasket leakage (continued)
body to bonnet gasket leakage (continued)
body to bonnet gasket leakage (continued)
body to bonnet gasket leakage (continued)
gate valve difficult to operate
gate valve difficult to operate
gate valve difficult to operate
gate valve difficult to operate
gate valve difficult to operate
gate valve hard to operate (continued)

gate valve hard to operate (continued)
gate valve hard to operate (continued)
gate valve hard to operate (continued)
gate valve chattering
gate valve chattering
gate valve chattering (continued)
gate valve chattering (continued)
gate valve chattering (continued)
gate valve chattering (continued)
leakage across the disc and seat in a globe valve
leakage across the disc and seat in a globe valve
leakage across the disc and seat in a globe valve
leakage across the disc and seat in a globe valve
leakage across the disc and seat in a globe valve (continued)

intermittent leakage across the valve
intermittent leakage across the valve
intermittent leakage across the valve
screwed bonnet loosening off repeatedly
screwed bonnet loosening off repeatedly (continued)
screwed bonnet loosening off repeatedly (continued)
piping flange leaking
valve to piping flange leaking (continued)
valve to piping flange leaking (continued)
pressure safety valve leaking
pressure safety valve leaking
pressure safety valve leaking (continued)
pressure safety valve leaking (continued)
intermittent vibration on valves and associated piping

intermittent vibration on valves and associated piping
intermittent vibration on valves and associated piping
continual leakage across a butterfly valve
continual leakage across a butterfly valve
continual leakage across a butterfly valve
hand-operated valve difficult to open
hand-operated valve difficult to open
hand-operated valve difficult to open
hand-operated valve difficult to open
hand-operated valve difficult to open
hand-operated valve difficult to open
hand-operated valve difficult to open
hand-operated valve difficult to open
noisy drive
noisy drive

noisy drive
noisy drive
noisy drive
noisy drive
chain climbing sprocket teeth
chain climbing sprocket teeth
chain climbing sprocket teeth
chain climbing sprocket teeth
chain climbing sprocket teeth
chain climbing sprocket teeth
chain climbing sprocket teeth
drive is running excessively hot
drive is running excessively hot
drive is running excessively hot
drive is running excessively hot

chain hanging in sprocket

chain hanging in sprocket

chain hanging in sprocket

chain whip

chain whip

chain whip

chain whip

chain whip

stiff chain joints

stiff chain joints

stiff chain joints

stiff chain joints

stiff chain joints

stiff chain joints

stiff chain joints
wear on chain link plates or sides of sprocket teeth
broken pins, bushings, or rollers
broken pins, bushings, or rollers
broken pins, bushings, or rollers
broken pins, bushings, or rollers (continued)
broken pins, bushings, or rollers (continued)
broken pins, bushings, or rollers (continued)
broken pins, bushings, or rollers (continued)
pulsation
pulsation
pulsation
pulsation
pulsation

pulsation
broken sprocket teeth
broken sprocket teeth
cotter pins coming out
cotter pins coming out
damaged conveyed articles
damaged conveyed articles
damaged conveyed articles
noisy operation of the unit
noisy operation of the unit
noisy operation of the unit
noisy operation of the unit
noisy operation of the unit
excessive operating temperature

excessive operating temperature
excessive operating temperature
excessive operating temperature
oil leakage
oil leakage
oil leakage
loosened mounting bolts
system pressure too low
system pressure too low
system pressure too low
system pressure too high
system pressure too high
system pressure constantly fluctuating
very erratic pressures and sight flows, indicating a very uneven and bumpy flow

sounding of alarm

sounding of alarm

standby pump and alarm cycling on and off

standby pump and alarm cycling on and off

standby pump and alarm cycling on and off

standby pump and alarm cycling on and off

pump running noisily

pump running noisily

pump running noisily

pump running noisily

pump running noisily

pump running noisily

pump running noisily

pump running noisily

pump running noisily (continued)
pump running noisily (continued)
pump running noisily (continued)
belt slipping
belt slipping
belt slipping
belt slipping
belt slipping
belt turned over in sheave
belt turned over in sheave
repeated belt breakage
repeated belt breakage
repeated belt breakage
rapid wear of the belt

rapid wear of the belt
rapid wear of the belt
rapid wear of the belt
rapid wear of the belt
rapid wear of the belt
rapid wear of the belt
belt cracked and hardened, causing slippage
belt whipping
belt whipping
hot bearings
hot bearings
hot bearings (continued)
one or two belts broken in a set
one or two belts broken in a set
excessive belt stretch

excessive belt stretch
excessive belt stretch
unequal belt stretch
unequal belt stretch
unequal belt stretch
unequal belt stretch
unequal belt stretch
unequal belt stretch
belt separation
belt separation
topside belt wear
topside belt wear
opening of the envelope seam on belt
abnormal envelope wear

belt soft or swollen
belt envelope hardening and cracking
fan output below scfm
fan output below scfm
fan output below scfm
fan output below scfm (continued)
fan output below scfm (continued)
fan output below scfm (continued)
fan output below scfm (continued)
fan output below scfm (continued)
fan output below scfm (continued)
vibration and noise
vibration and noise
vibration and noise (continued)
vibration and noise (continued)

vibration and noise (continued)
damaged bearings
damaged bearings
damaged bearings (continued)
damaged bearings (continued)
damaged bearings (continued)
damaged bearings (continued)
damaged bearings (continued)
damaged bearings (continued)
damaged bearings (continued)
bearing overheating
bearing overheating
bearings overheating (continued)
bearings overheating (continued)

[illegible]

trap not discharging
trap not discharging
trap not discharging
trap not discharging
trap not discharging (continued)
trap not discharging (continued)
trap not discharging (continued)
trap not discharging (continued)
trap not discharging (continued)
trap not discharging (continued)
trap not discharging (continued)
trap not discharging (continued)
trap not discharging (continued)
continuous discharge from trap

continuous discharge from trap
continuous discharge from trap
continuous discharge from trap
continuous discharge from trap
continuous discharge from trap
continuous discharge from trap
continuous discharge from trap (continued)
continuous discharge from trap (continued)
sluggish or uneven heating
sluggish or uneven heating
sluggish or uneven heating
sluggish or uneven heating (continued)
sluggish or uneven heating (continued)
back pressure troubles

back pressure troubles

back pressure troubles

back pressure troubles

back pressure troubles

motor not starting

motor not starting

motor not starting

motor not starting

motor not starting (continued)

motor not starting (continued)

motor not starting (continued)

motor not starting (continued)

motor not starting (continued)

motor not starting (continued)

motor not starting (continued)
motor not starting (continued)
motor not starting (continued)
motor stalling
motor stalling
motor stalling
motor stalling
motor stalling (continued)
motor running and then dying down
motor not coming up to speed
motor not coming up to speed
motor not coming up to speed
motor not coming up to speed (continued)
motor not coming up to speed (continued)

motor not coming up to speed (continued)
motor taking too long to accelerate
motor taking too long to accelerate
motor taking too long to accelerate
motor taking too long to accelerate (continued)
wrong rotation
motor overheating while running under load
motor overheating while running under load
motor overheating while running under load
motor overheating while running under load (continued)
motor overheating while running under load (continued)
motor overheating while running under load (continued)
motor overheating while running under load (continued)
motor overheating while running under load (continued)

motor overheating while running under load (continued)
motor overheating while running under load (continued)
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
motor vibrates after corrections have been made
unbalanced line current on poly-phase motors during normal operation
unbalanced line current on poly-phase motors during normal operation

unbalanced line current on poly-phase motors during normal operation
unbalanced line current on poly-phase motors during normal operation
scraping noise
scraping noise
scraping noise
noisy operation
noisy operation (continued)
hot bearings
hot bearings
hot bearings
hot bearings
hot bearings
hot sleeve bearings
hot sleeve bearings

hot sleeve bearings
hot sleeve bearings (continued)
hot sleeve bearings (continued)
hot anti-friction bearing
hot anti-friction bearing
hot anti-friction bearing
hot anti-friction bearing
hot anti-friction bearing
overload on the driver
overload on the driver
overload on the driver (continued)
overload on the driver (continued)
overload on the driver (continued)
overload on the driver (continued)

overload on the driver (continued)
overload on the driver (continued)
overload on the driver (continued)
overload on the driver (continued)
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes
excessive sparking or flashing at brushes (continued)
excessive sparking or flashing at brushes. blackened commutator

intermittent sparking at brushes
fine dust under coupling employing rubber buffers or pins
smoke, or solder 'whiskers' extending from the armature
motor will not start
motor will not start
excessive humming sound
excessive humming sound
regular clicking noise
rapid knocking
brush 'chatter'
brush 'chatter'
vibration
vibration
vibration

motor overheating
motor overheating
motor overheating
motor overheating
motor overheating
bearing overheating
bearing overheating
bearing overheating
bearing overheating
bearing overheating
bearing overheating
commutator hot
commutator hot
overheating

overheating
overheating
overheating
overheating (continued)
overheating (continued)
overheating (continued)
welding of the contacts
welding of the contacts
welding of the contacts (continued)
welding of the contacts (continued)
welding of the contacts (continued)
welding of the contacts (continued)
shorter contact life
shorter contact life

shorter contact life (continued)
shorter contact life (continued)
shorter contact life (continued)
shorter contact life (continued)
frequent thermal nipping
frequent thermal nipping
frequent thermal tripping (continued)
frequent thermal tripping (continued)
frequent thermal tripping (continued)
frequent thermal tripping (continued)
breaker tripping magnetically
breaker tripping magnetically (continued)
breaker tripping magnetically (continued)
mechanical and electrical malfunctions

mechanical and electrical malfunctions (continued)
mechanical and electrical malfunctions (continued)
vibration and noise
overheating
high exciting current
high core loss
insulation failure
smoke
burned insulation
burned insulation
burned insulation
overheating
breakers or fuses open