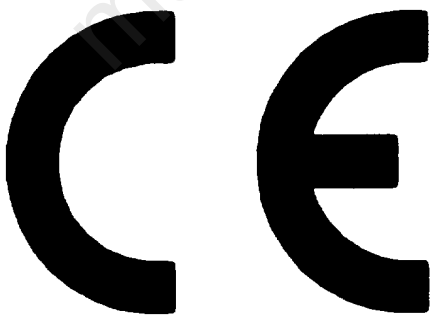


STACKER

Type: _____

Manufacturing year and number: _____



NB:

Please read this manual before operating or performing maintenance on the forklift truck. Following the instructions will improve safety and enable unnecessary danger situations and accidents to be avoided.

2.12 OPERATION ENVIRONMENT

Temperature:

Operation	-35°C - +55°C
Storage	-40°C - +70°C

Humidity	100% condensing according to IEC 68-2-30, Db
----------------	--

2.13 COOLING

External cooling Contact cooling to metal plate or frame

Isolation 500VAC according to prEN 1175-1

2.14 EMC

Immunity: According to prEN50081-2

Emmission: According to prEN50082-2

WIRING: Throttle

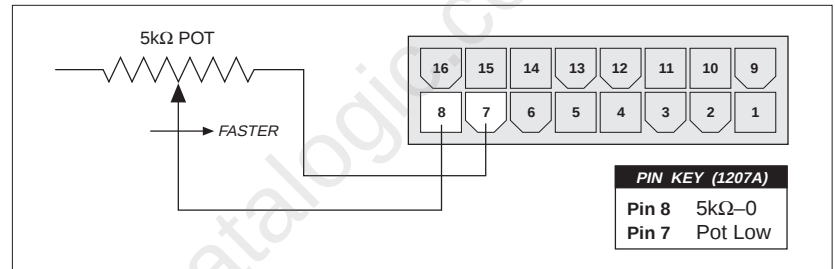
Wiring for various throttles is described below. They are characterized as Type 1, Type 2, and Type 3 throttles in the programming menu of the handheld programmer. NOTE: In the text, throttles are identified by their nominal range and not by their actual active range.

If the throttle you are planning to use is not covered, please contact the Curtis office nearest you.

5k Ω –0 Throttle (“Type 1”)

The 5k Ω –0 throttle (called a “Type 1” throttle in the programming menu of the handheld programmer) is a 2-wire resistive throttle that connects between the

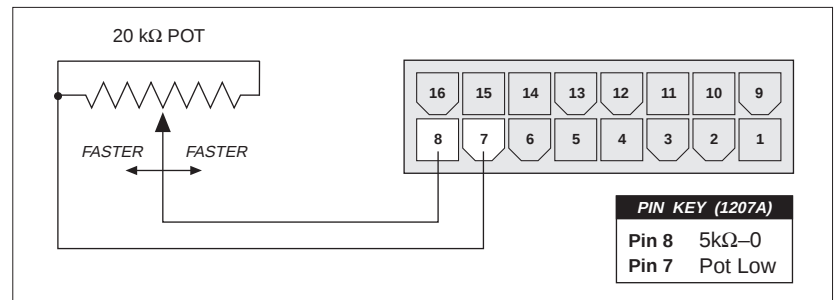
Fig. 5A Wiring for 5k Ω –0 throttle (“Type 1”).



5k Ω –0/0–5k Ω pin (Pin 8) and the Pot Low pin (Pin 7), as shown in Figure 5A. It doesn’t matter which wire goes on which pin. Zero speed corresponds to 5k Ω and full speed corresponds to 0 Ω .

In addition to accommodating the basic 5k Ω –0 throttle, the Type 1 throttle is the easiest with which to implement a wigwag-style throttle. Using a 20k Ω potentiometer wired as shown in Figure 6A, the pot wiper can be set such that the controller has 5k Ω between Pins 7 and 8 when the throttle is in the neutral position (i.e., at the center of the pot). The throttle mechanism can then be designed such that rotating it either forward or back decreases the resistance

Fig. 6A Wiring for 20k Ω potentiometer used as a wigwag-style throttle (“Type 1”).



CAT NS1200R/1500R/2000R

NO: 52-

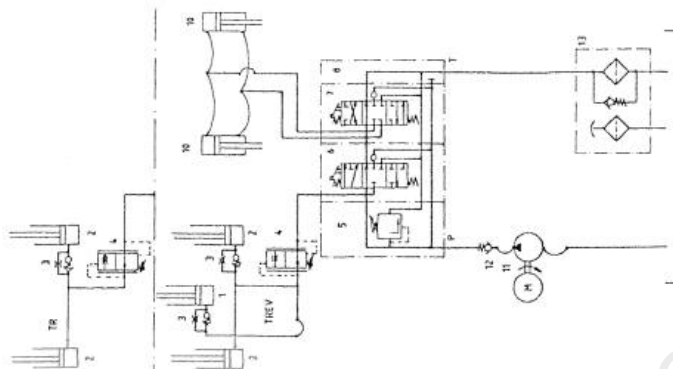
PMC 1207-1104 (PRGM: 00-04)

Date

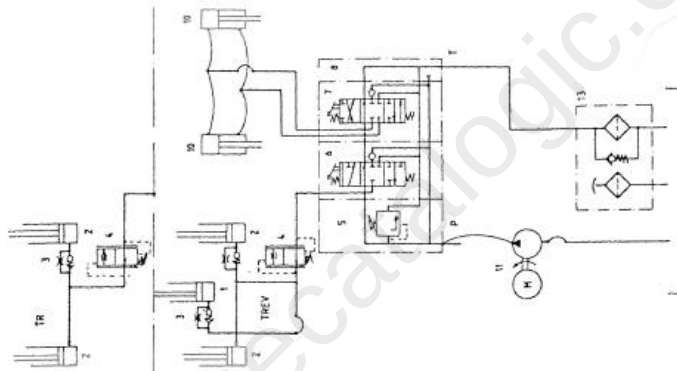
8.2.2002

PARAMETER:	RANGE:	SET:
MAIN C/L	20-250 A	230 A
L/S MAIN C/L	20-250 A	230 A
PLUG C/L	20-250 A	20 A
L/S PLUG C/L	20-250 A	72 A
EMR REV C/L	20-250 A	140 A
LS EMR REV C/L	20-250 A	140 A
RAMP C/L	20-250 A	200 A
L/S RAMP C/L	20-250 A	200 A
ACCEL RATE	0,1-3,0 s	2,0 s
QUICK START	0-6	0
THROTTLE TYPE	1,2,3,4	2
RAMP SHAPE	20-70 %	50 %
CREEP SPEED	0-25 %	10 %
LOW SPEED	40-100 %	100 %
HIGH SPEED	40-100 %	100 %
EMR REV SPEED)	25-100 %	80 %
(EQUENCING DLY	0-3 s	0 s
VARIABLE PLUG	on/off	on
HIGH PEDAL DIS	0,1,2	0
SRO	0,1,2,3	0
ANTI-TIEDOWN	on/off	off

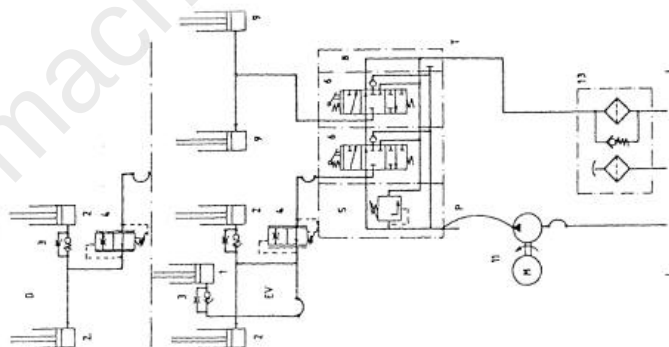
NS2000RTREV, NS2000RTR



NS1500RTREV, NS1500RTR, NS1200RTREV, NS1200RTR
NS1500TREV, NS1500TR, NS1200TREV, NS1200TR



NS1500RPNEV, NS1500RPND, NS1200RPNEV, NS1200RPND
NS1500PNEV, NS1500PND, NS1200PNEV, NS1200PND

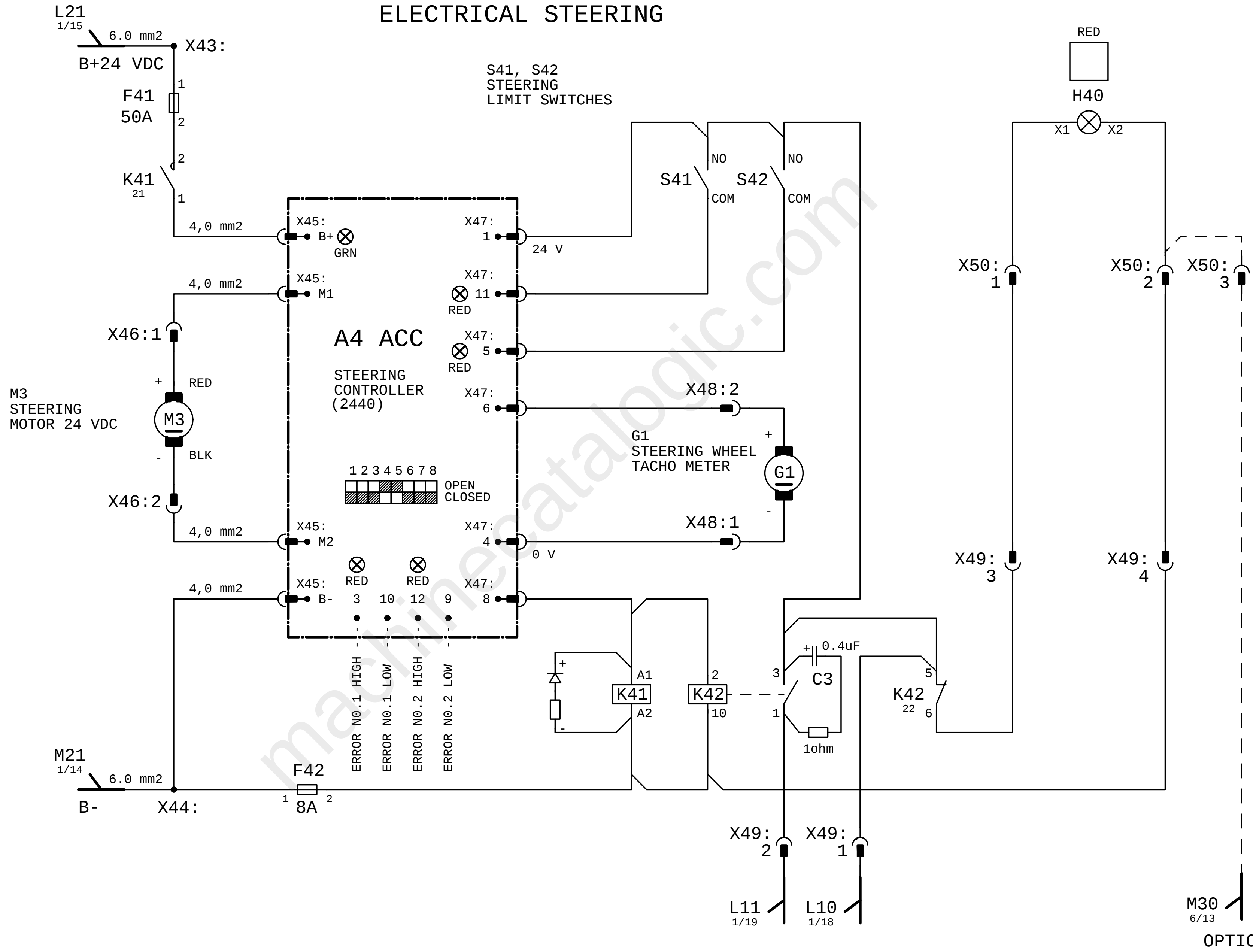


- 1. Central cylinder
- 2. Side cylinder
- 3. Valve
- 4. Valve
- 5. Valve
- 6. Valve segment N

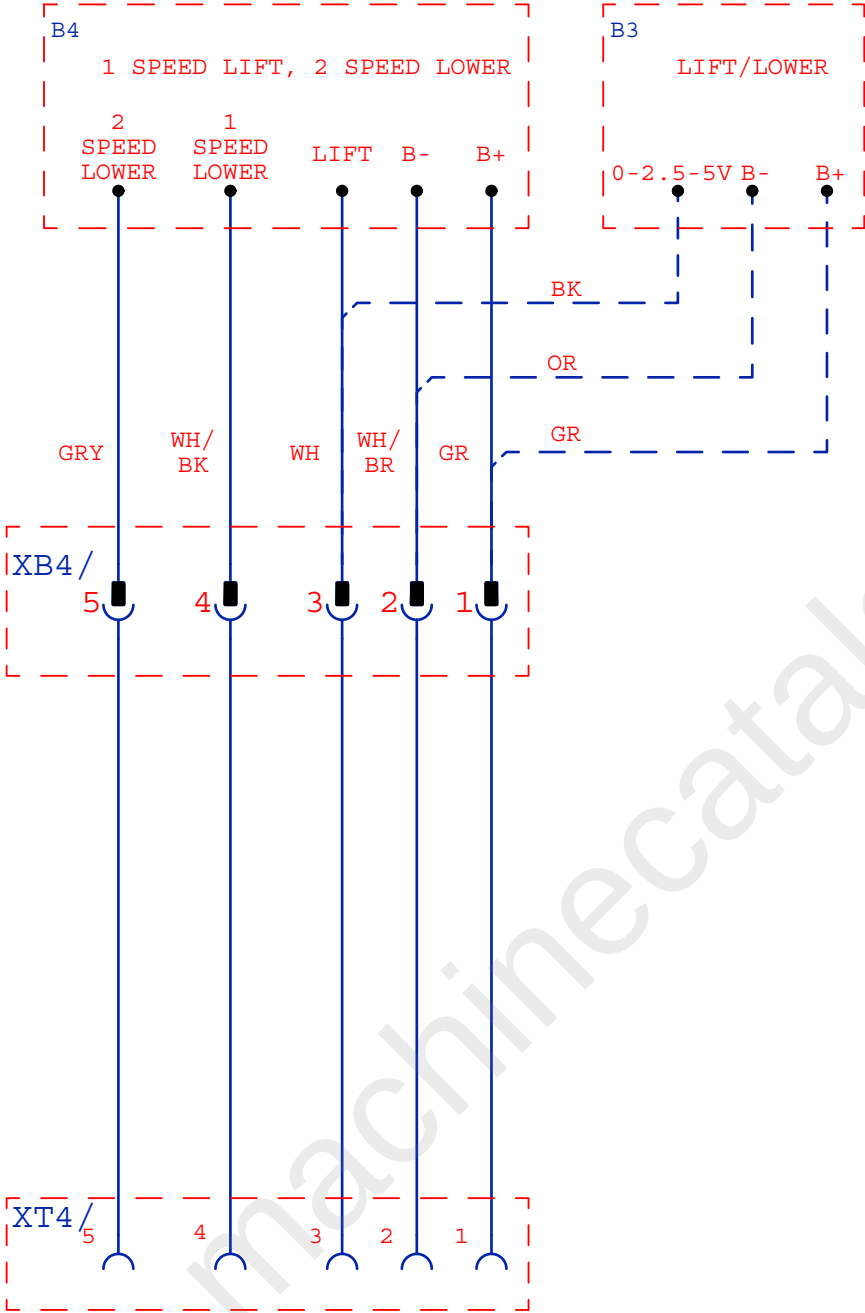
- 7. Valve segment G
- 8. Segment
- 9. Basic lift cylinder
- 10. Stabilizer cylinder
- 11. Pump motor
- 12. Valve
- 13. Filter

NS1200/1500/2000/R
HYDRAULIC DIAGRAM
TH8 090

ELECTRICAL STEERING



1 SPEED LIFT / 2 SPEED LOWER
OR
PROPORTIONAL LIFT / LOWER,
NOT BOTH IN SAME TRUCK



2.7 DIGITAL CONTROL INPUTS

Logic "0"= $\leq 4\text{VDC}$

Logic "1"= $\geq 8\text{VDC}$

max 58VDC

Start/stop Logic 1/logic 0
The same input as
internal supply

Positiv direction limiting Logic 0: no limiting
..... Logic 1: limiting

Negative direction limiting Logic 0: no limiting
..... Logic 1: limiting

2.8 SAFETY RELAY OUTPUT

Safety relay 2440 24VDC (closed): ok
4820 48VDC (closed): ok
.....
..... 0VDC (open): error
.....
..... Relay data: max 48VDC, 3A

2.9 MOTOR SPEED FEEDBACK

Armature feedback with I*R-compensation.

I*R-compensation Adjustable in 4 levels
..... with dipswitches

2.10 SAFETY SYSTEM

When errors are detected the safety relay opens within 75ms and the controller blocks power output. According to prEN 1175-1 The control is achieved by a current pulse which is generated by the safety system with frequency of 15Hz. The pulse passes through the sensor, power electronics and motor circuit. If the pulse disappears or changes shape beyond certain limits the safety system will indicate error.

At every start up the safety system is checked by an error simulation. It takes max 0,3 sec.

If the controller is stopped (turned off) it has to be >2 sec. before a new start up.

.....

Full Version Available

Caterpillar NS1500R Stacker Operator Manual (WHOMM0005)

Caterpillar NS1500R Stacker operator manual, covers controls, inspections, battery care, and safe operation. Searchable PDF download.

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