

**Protection against theft**



Figure 3-1

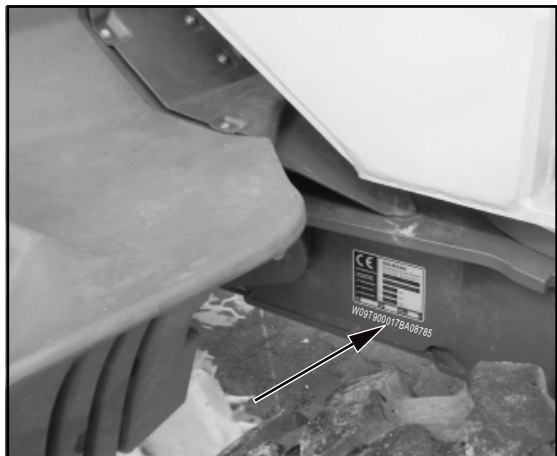


Figure 3-2



Figure 3-3

### 3 Protection against theft

Instances where construction machines were stolen have considerably increased in recent years.

To make it possible for the police, customs and other authorities to find and identify machines much faster, **MECALAC** construction machines are fitted with the following identifying features:

#### 3.1 Identifying features on the loader

(1) Loader type plate (3-1/arrow). Among other details, the loader type plate also gives the 17-digit **FIN** number (truck identification number) starting with W09.

(2) The **FIN** number is also stamped into the chassis (3-2/arrow).

(3) ROPS plate (3-3/arrow).

This plate gives the name of the manufacturer as well as details on the ROPS type, the loader type and the permissible overall weight.

#### 3.2 Parking the loader

- (1) Turn the steering wheel fully to the left or the right.
- (2) Apply the parking brake (4-14/2).
- (3) Tip the quick-change device until
  - the tines of the bucket,
  - the tines of the fork-lift attachment or
  - the boom of the lifting hook, etc.

can be placed on the ground.

- (4) Secure the hand lever(s) for the working and auxiliary hydraulics (4-12/1) (actuate toggle switch 4-12/2).
- (5) Set the drive switch (4-13/3) to "forward" or "reverse".
- (6) Switch to gear stage "Alpha max." (4-13/1).
- (7) Remove the ignition key.
- (8) Remove the main battery switch (8-42/1).
- (9) Switch working lights (4-11/3) to "2". \*
- (10) Switch on the warning beacon (opt.) (4-11/2). \*
- (11) Switch on the hazard flasher (4-11/4). \*
- (12) Switch the steering column switch (4-10/3) to the "High beam" position. \*
- (13) Lock both doors.
- (14) Lock the engine hood.
- (15) Lock the tank lid.

\* In case of short-circuiting, persons in the vicinity should be made aware of the unusually lit machine.

### 3.3 Drive-away interlocks

#### 3.3.1 Electronic drive-away interlock with transponder

(option)

##### 3.3.1.1 Function description/operating instructions

The state-of-the-art electronic drive-away interlock offers a most effective protection against theft.

Operation occurs with a small oval keyring pendant attached to the ignition key of the loader. A so-called transponder is located in the moulded, maintenance-free pendant. When you insert the ignition key into the ignition lock, the pendant automatically comes into the reach of a special antenna fitted in the dashboard and disables the drive-away interlock when the ignition is switched on. The transponder itself is a passive component, i.e. it is maintenance-free and does not need a battery. The black box releases the interrupted circuits only when the right code is received so that the vehicle can be started. There are 4 billion (!) code variants, and every attempt to short-circuit the control unit will neither short-circuit nor disable it.

Each drive-away interlock comes with a red and a black transponder. Generally, both can be used to disable the system. Compared with the black transponder, the red one also offers the option of programming (up to eight) new transponders (e.g. in case of loss where you can also block lost transponders for the system. For this reason, we recommend protecting the red transponder against unauthorized access (e.g. while your vehicle is at a garage for repairs) or against loss. Should the red transponder be lost, you must remove the drive-away interlock unit and return it to MECALAC Baumaschinen GmbH to have a new red transponder programmed.

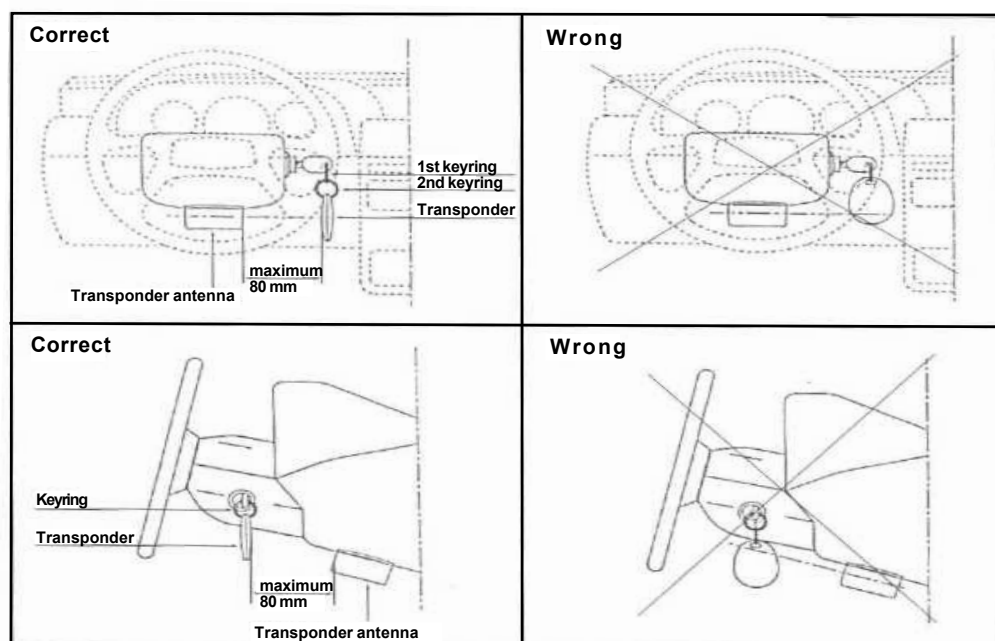
Please read the following instructions carefully to avoid malfunctions. It is indispensable that the garage installing the system completes the enclosed documents (check list, certificate of guarantee and proof of insurance). Please file the completed certificate of guarantee with your vehicle documents, but not within the vehicle because it contains important data.

##### 3.3.1.2 Activating the system

When the ignition key is turned to the OFF position and removed, the drive-away interlock will activate automatically after approx. 20 seconds. The red LED installed in the dashboard indicates this state by flashing. The power supply is interrupted now and provides an effective vehicle protection against theft.

##### 3.3.1.3 Deactivating the system

The system can be deactivated only with the transponder specially coded for this system. Please make sure the position of the transponder complies with the drawings below. Please use the supplied keyrings.



To deactivate, insert the ignition key with the attached transponder into the ignition lock as usual and turn it to the "Ignition ON" position. This will activate the transponder, and the code will be read. When the drive-away interlock detects the correct code, it deactivates the interlock, and the LED goes dark. The system needs approx. 1 second to detect the code signal. For this reason, you should avoid turning the key immediately from the "OFF" position to the "Start" position; rather wait in the "Ignition ON" position until the LED goes dark. You can start your vehicle now. The drive-away interlock is activated only when the ignition key is removed again.

### 3.3.1.4 Programming additional transponders

The system accepts a maximum of eight black transponders that you can program yourself. You can order additional transponders from where your system was installed. Please proceed as follows to program a new transponder:

1. The drive-away interlock must be activated, i.e. the LED must be flashing.
2. Separate the transponder from your ignition key.
3. Turn the ignition key to "ON".
4. Turn the ignition key to "OFF".
5. Turn the ignition key to "ON".
6. Turn the ignition key to "OFF".
7. Turn the ignition key to "ON".
8. Deactivate the drive-away interlock by holding the red transponder into the vicinity of the transponder antenna (ignition lock).
9. The LED is lit permanently as soon as the transponder has been activated and the code read.
10. Remove the red transponder from the ignition lock area.
11. Wait for the LED to start flashing. Now bring the transponder to program into the reach of the transponder antenna to read in the new code.
12. The red LED goes dark when the code has been read in; programming is now complete. To teach in more transponders, please repeat steps 1. to 12..

To make a black transponder that was lost unusable for the finder, please exclusively program the transponder you used to start programming in step 8. as described in step 11. into the system. Please repeat this procedure eight times. As a result, the system will only accept the red transponder used for programming because all eight memory places are occupied by this transponder now. Then program all those transponders you want to use in future as described in steps 1. to 12.

### 3.3.1.5 Check list: testing for proper function

Please execute the following tests carefully and confirm each of them to the customer with a checkmark. Make sure each test step is successful so that the functioning of the drive-away interlock can be ensured.

- ( ) Reconnect the vehicle's battery. The drive-away interlock is activated now; the LED must be flashing.
- ( ) Connect a transponder with the ignition key of the vehicle. Insert the ignition key into the ignition lock and turn it to "ON". Wait for the LED to go dark. The drive-away interlock is deactivated now.
- ( ) Wait for approx. 1 minute. The drive-away interlock must not reactivate (LED in the electronic lock must not flash).
- ( ) Turn the ignition key to "OFF" and remove it from the ignition lock. The system must activate after approx. 20 seconds (the red LED in the electronic lock must flash).

Once the tests have been completed successfully, you can proceed with step 7. of the Installation Instructions. When testing reveals any problems, please check whether a cable has been interchanged or there is a poor solder joint. If necessary, contact the customer service.

- ( ) Cable joints  
All cable joints for which there are no ready-for-use connection assemblies were properly soldered and then expertly insulated.

Function testing was properly performed by:

Date of implementation/signature of person who performed implementation

### Advantages in case of an insured event:

The transponder for drive-away interlock meets the new, stricter requirements of the insurance companies. Ask your insurance company for the appropriate details.

### **3.3.2 Encodable drive-away interlock**

(option)

The "encodable drive-away interlock" is an electronic drive-away interlock that deactivates vital loader functions. A digital code lock releasing these loader functions is activated when the correct code has been entered. This code number can be changed as often as desired.

#### **Advantages in case of an insured event:**

Ask your insurance company for the appropriate details.