



USE AND MAINTENANCE MANUAL

IVECO TRAKKER 380 €6 6X6

WITH EMERGENCY ELECTRIC PUMP





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1. Introduction

Dear Customer,
in order to obtain a satisfactory use of the vehicle, this manual must be read in its entirety.
The indications given for system maintenance must be respected and punctually implemented to guarantee safe and reliable behavior over time.

WARNING!

- No tampering, modification or replacement of components with other non-original parts is permitted.
- Any repair work must be carried out only by workshop personnel subject to authorization by S.T. System Truck.
- Structural and plant modifications and / or alterations to original features are not permitted.



IMPORTANT!

S.T. System Truck declines all responsibility and considers expired the warranty for non-compliance with the indications provided in this document.



2. Description

The conversion performed on the vehicle consists in the application of an emergency electric pump for the vehicle's original steering system. It is activated in case of failure of the

main hydraulic pump or of the engine, allowing the steering to be turned with limited steering effort.

The emergency electric pump is contained inside a sheet metal box (figure 1) and is mounted on the right side of the vehicle, behind the diesel tank. It is equipped with a micro-relay and a contactor to control the ignition of the motor, and a thermocouple to deactivate the system in case of overheating of the motor itself.



Fig. 1

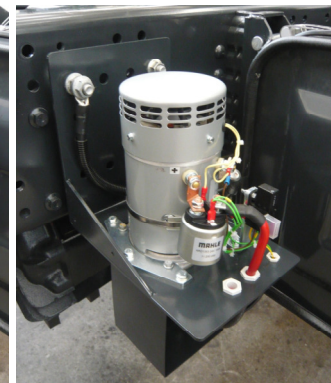


Fig. 2

In the dashboard there is a red warning light (figure 3) which, together with an acoustic signal, warns about the emergency electric pump activation.



IVECO TRAKKER 380 €6 6X6 WITH EMERGENCY ELECTRIC PUMP



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Fig. 3

Under normal operating conditions, the emergency electric pump is inactive and the steering system operates normally, using the vehicle's original steering pump applied to the engine.

If the hydraulic pressure switch detects a loss of pressure from the original steering pump, due to the breakdown of the pump itself or of the vehicle's engine, the emergency electric pump is activated.

Other conditions necessary for the electric pump to activate are:

- the instrument panel is switched on;
- the parking brake is switched off.

It is therefore normal that, when the ignition is switched off and the parking brake disengaged, the emergency electric pump is activated temporarily until the vehicle engine is switched on.

To manage the ignition of the electric pump, there is a dedicated micro-relay in the dashboard panel in the cabin (figure 4).



Fig. 4

Below the right side-member of the vehicle frame, near the first axle, there is a group of valves (figure 5) dedicated to the management of the dual power supply to the power steering: from the pump on the engine or from the emergency electric pump.

The pressure switch that controls the activation of the electric pump in case of failure, is also applied to this group. To this group also converge the two hoses coming from the pump on the engine and from the electric pump, and the outlet hose to the power steering.

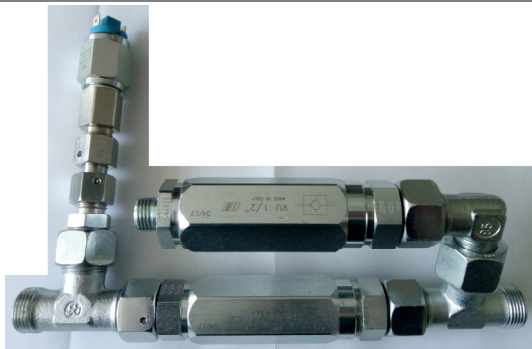


Fig. 5

The hydraulic fluid necessary for the electric pump to be fed from the tank, is taken through a derivation connection (figure 6) located between the tank and the pump (under the cabin).

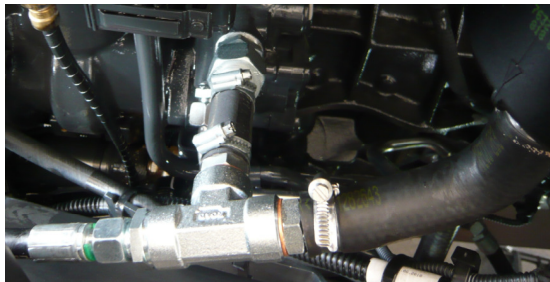


Fig. 6

On the external wall of the vehicle battery box, a 150A nominal value fuse (figures 7 and 8) is applied to the power line required for activating the electric pump.

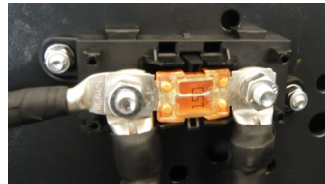


Fig. 7



Fig.8

WARNING!

The application of the emergency electric pump is specifically designed for the management of an emergency situation and can **only be used** to safely stop the vehicle in the event of a fault during the drive. If the electric pump ignites while driving, stop the vehicle immediately and request repair assistance. Any repairs must be carried out only by workshop personnel subject to authorization by S.T. System Truck.



The emergency electric pump is connected directly to the vehicle's power supply batteries. Make sure that the system remains active for as little time intervals as possible to avoid the discharge of the vehicle's batteries. S.T. System Truck declines all responsibility for the premature wear of the vehicle's batteries, due to the incorrect use of the emergency electric pump.





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3. Use

The operation of the system is independent and does not require any action by the driver.

4. Maintenance

The emergency electric pump system is installed in addition to the original steering system; therefore, it does not have a dedicated hydraulic oil tank but shares the originally present one on the vehicle. For the correct functioning of the system it is therefore necessary to perform the maintenance scheduled for the original steering system according to the vehicle manufacturer's instructions, and to carry out the periodic checks prescribed in this manual.

5. Periodic checks

5.1. Periodically check the hydraulic oil level of the power steering. If the level is low, top up with the hydraulic oil prescribed by the vehicle manufacturer in the user's manual. In the event of low level, check for no oil leaks from fittings, pipes and hoses: in case of leaks, proceed as soon as possible to eliminate them.

NOTE: the ATF oil used in the system is highly polluting; avoid contact with skin and spills in the environment.

5.2. Periodically check the tightness of the hydraulic connections: if there is any oil leakage, immediately intervene to eliminate the leak by tightening the fitting or replacing if necessary.

5.3. Periodically check the condition of the system hydraulic hoses: in the presence of abrasions or peeling, replace them and restore correct fixing.

5.4. Periodically check the correct operation of the emergency electric pump. To perform this operation, it is necessary to:

- Turn ignition on, without starting the engine;
- Release the parking brake.

Check for:

- the lighting of the warning light and for the electric pump activation buzzer;
- the steering wheel effort to be not excessive, when the system is active with the engine off.

WARNING:



- Overheated oil can cause burns: use protective gloves.



- Losses of overheated oil and dirt could trigger a fire.



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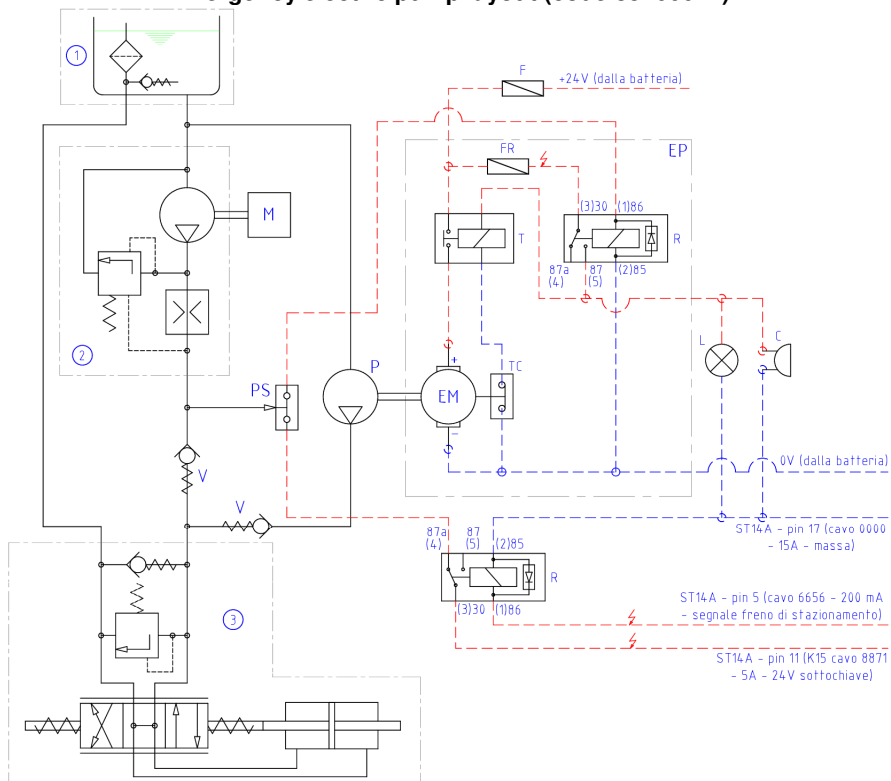


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| TIME - DISTANCE INTERVAL | EMERGENCY ELECTRIC PUMP SYSTEM MAINTENANCE AND CHECKS |
|--|---|
| According to manufacturer's instructions | Checks required for the maintenance of the steering system. |
| Every 2 months or 10.000 km | Check for the correct operation of the emergency electric pump – according to 5.4. |
| Every 12 months or 50.000 km | <ul style="list-style-type: none">• Check for the piping: check for the pipes not to show cracks and to be not in contact with metal parts.• Check for the fittings to be correctly tightened to avoid leakage or air suction. |

6. Drawings

Emergency electric pump layout (code 35100017)





IVECO TRAKKER 380 €6 6X6 WITH EMERGENCY ELECTROPUMP



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KEY - ORIGINAL VEHICLE SYSTEM

| | |
|---|---------------------|
| M | THERMAL ENGINE |
| 1 | OIL TANK |
| 2 | MAIN HYDRAULIC PUMP |
| 3 | POWER STEERING |

KEY – ADDED COMPONENTS

| | |
|----|---|
| EP | EMERGENCY ELECTRIC PUMP (SHEET-METAL CASSETTE WITH VENTILATION HOLES) |
| P | GEAR PUMP |
| EM | ELECTRIC MOTOR (24V DC) |
| TC | ELECTRIC MOTOR THERMOCOUPLE |
| T | CONTACTOR |
| F | FUSE 150A |
| FR | FUSE 3A |
| R | RELAY |
| PS | LOW PRESSURE SWITCH ON POWER STEERING CIRCUIT (N.C.) |
| V | CHECK VELVE |
| L | ELECTROPUMP INTERVENTION WARNING LIGHT |
| C | ELECTRIC PUMP INTERVENTION BUZZER |



7. Contacts

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[CTRL+Click on link to open Google Maps: https://goo.gl/maps/SinymEHJ3cx](https://goo.gl/maps/SinymEHJ3cx)

Sat Nav coordinates: **45°17'08.2"N+10°47'58.8"E**

How to find us:

By car:

From Milan → Motorway A4 exit Peschiera del Garda. Take SR249 (passing Salionze, Valeggio sul Mincio) to Roverbella.

From Venice → Motorway A4. At A4/A22 conjunction take direction Modena. Exit A22 Nogarole Rocca. Take SR62 then SP17 to Roverbella.

From Bologna → Motorway A1. At A1/A22 conjunction take direction Verona-Brennero. Exit Nogarole Rocca. Take SR62 then Sp17 to Roverbella.

From Munich (D) → Motorway A22 direction Modena. Exit A22 Nogarole Rocca. Take SR62 then SP17 to Roverbella.

By train:

Trenitalia main lines East-West and North-South directions converge to Verona. Then Mozzecane Station with local line is the nearest station to our facilities.

By plane:

Verona airport Valerio Catullo is the nearest airport to our facility. (20 min. by taxi). Other nearby international airports are: Bergamo Orio al Serio (1,25 hr), Venice Marco Polo (1,25 hr), Bologna Guglielmo Marconi (1,25 hr), Milan Linate (1,5 hr) and Milan Malpensa (2,5 hr).