

PREPARING VEHICLE FOR USE OF THE CRANE

1. Familiarize yourself with the instruction plate mounted on the base of the crane.
2. Check that the vehicle is on level ground with the brakes on, and that the wheels are chocked.
3. Start the truck and accelerate the engine to the required r.p.m. Make sure that the air pressure in the system of the truck has reached the correct level.
4. Depress the clutch and engage the power take off, by means of the dash mounted switch (for vehicles with mechanical power take off, move the lever behind the driver's seat).
5. For trucks also having tipper, be sure that the shuttle valve CRANETIPPER is in the CRANE position. **Each movement of the shuttle valve must be made with the clutch depressed or the power take off disengaged.**
6. Before use of the crane, stabilize the vehicle by means of the outrigger legs, see special instructions on Page 4 and following.

UNFOLDING OF THE CRANE

7. Operate lever no. 2 (fig. 1) which controls the unfolding of inner boom until it is nearly in vertical position and then operate levers 3 and 4 (fig. 1) to unfold middle and outer booms.
8. Bring the lifting hook on the vertical of the load to be lifted by operating lever 1 (fig. 1) to rotate the crane and levers 3, 4 and 5 (fig. 1) to increase radius.

USE OF THE CRANE

9. Hook the load. Make sure it is not over the lifting capacities shown on the radius plate. At no time must the crane be overloaded or the load moved out of the radii given on the lifting capacity plate.
The loads that may be lifted with the standard hook correspond to those shown on the radius plate at the different extensions of the secondary boom. Heavier loads, within the capacity of the crane, must be lifted by the main hook, to be fixed in the special support placed on secondary boom.
To avoid possible damage to the lifting hook during operation, check that it is always free to rotate on it's pin and that there are no obstacles preventing vertical lift. Furthermore check the efficiency of hook security clip.

FOLDING OF THE CRANE

10. Avoid jerking the crane especially during descent of the load. Avoid sudden starting and stopping movements when loading, these can cause damage to the hydraulic system.
11. The speed of different movements can be regulated by "feathering" the controls. Operate lever gently applying more pressure for faster movement.
12. Slew loads with maximum care, avoid fast slewing. Pay attention to the stability of the vehicle when slewing, especially when the load hangs in front of the truck cab. In this area the lifting capacities are generally 50% less.
13. Do not continue to pull on any levers when the ram has come to the end of it's stroke, this will prevent overheating within the hydraulic system and possible damage to the pump.
14. Be sure that no one stands within the working area of the crane during operation, and observe all safety precautions with regard to lifting equipment.
15. Leaving inner boom approximately in vertical position, re-enter the sliding sections acting the lever 5 (fig. 1) fold then outer and middle booms bringing to stroke end the corresponding rams with lever 3 and 4 (fig. 1).
16. Slew the crane until the two stripes on the column and column support coincide.
17. Lower inner boom, lever 2 (fig. 1) in horizontal position, controlling that inner and outer booms lean on the stops welded on the base.
18. Lift and withdraw the outriggers legs.
19. **Disengage the power take-off.**

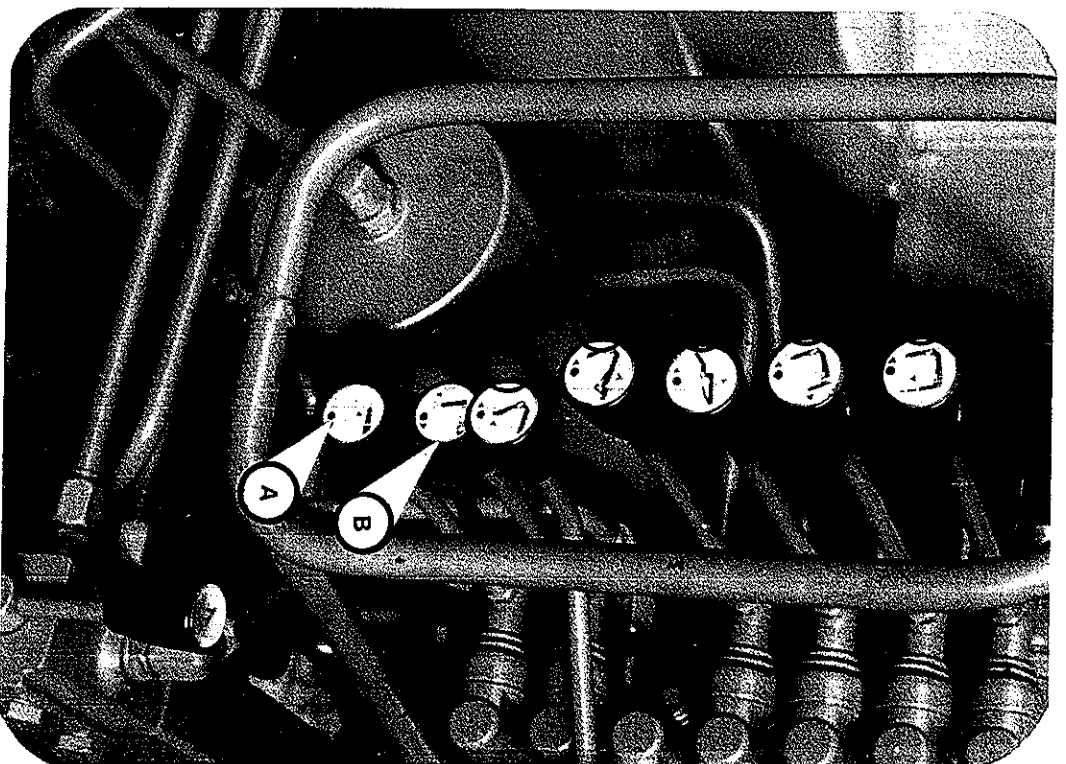


Fig. 1

The outriggers avoid stress to the chassis and suspension of the vehicle to which the crane is mounted. They also assure the stability of the truck whilst the crane is being used. The stability is increased by the hydraulic or hand lateral extension of the outriggers.

CRANE WITH FOUR OUTRIGGERS - ALL HYDRAULIC (OUT & DOWN)

- 1) The independent extension of the four outriggers is obtained by moving the lever «A» (fig. 1) and by alternating the positions of the deviator lever (see scheme fig. 2) or the one on the double control of the deviator (see scheme fig. 3).

Fig. 2 - Operation scheme of the deviator

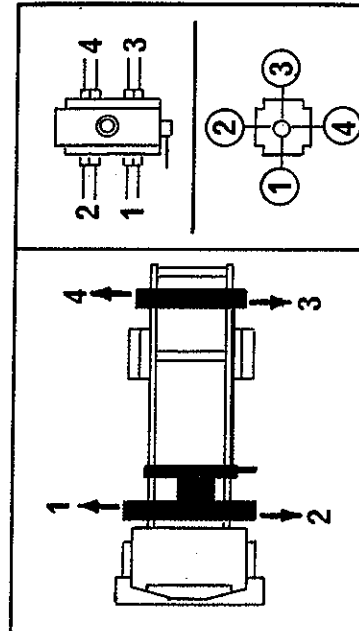
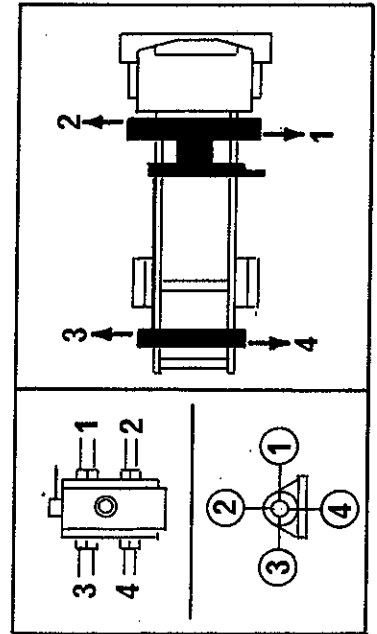


Fig. 3 - Operation scheme of the double control



- 2) The four outriggers are operated by alternating the position of check valve taps fitted on the rams (as per point 3).
- 3) Turn the lever of the tap incorporated in the check valve (fig. 4) on position 1 (open) and operating the lever «B» (fig. 1) obtain the descent of the outriggers to the ground. Turn the lever of the tap on position 2 (closed) and repeat the operation with the other outrigger the vehicle is now stabilized.

N.B. with both taps in positions 1 (open) a simultaneous operation of the outriggers is obtained but with no possibility of horizontally stabilize the vehicle in case of uneven ground.

- 4) When loading or unloading in complete with draw the outriggers legs repeating the opposite operation.

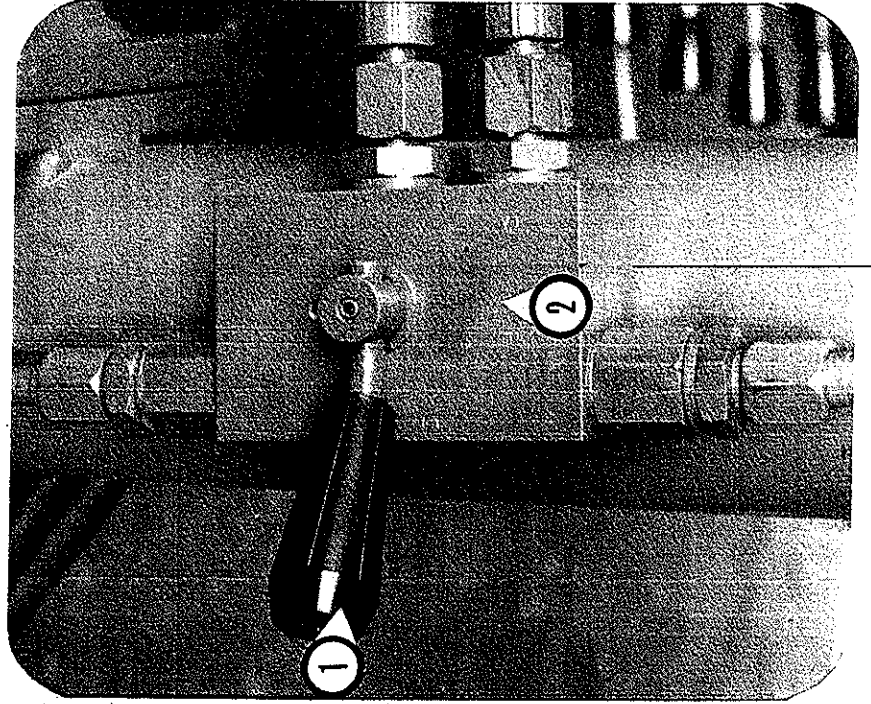


Fig. 4

On all Fassi models it is possible to add hydraulic accessories such as grabs, rotators, winches, extensions etc. For their operation, it is necessary to fit extra hydraulic controls and pipework. When pipework connections for accessories are quick release, it is necessary to act as follows:

- 1) Disengage the power take off;
- 2) Release the pressure within the pipework by operating the lever in both directions.

GRAB - ROTATOR

When mounting an accessory of this type, care must be taken that the overall weight, dimension and capacity do not overload the crane. Take care also that the maximum working pressure of the accessory corresponds to that of the crane. If the accessory requires a pressure considerably lower than that of the crane, it will be necessary to mount a by-pass valve on the pipework.

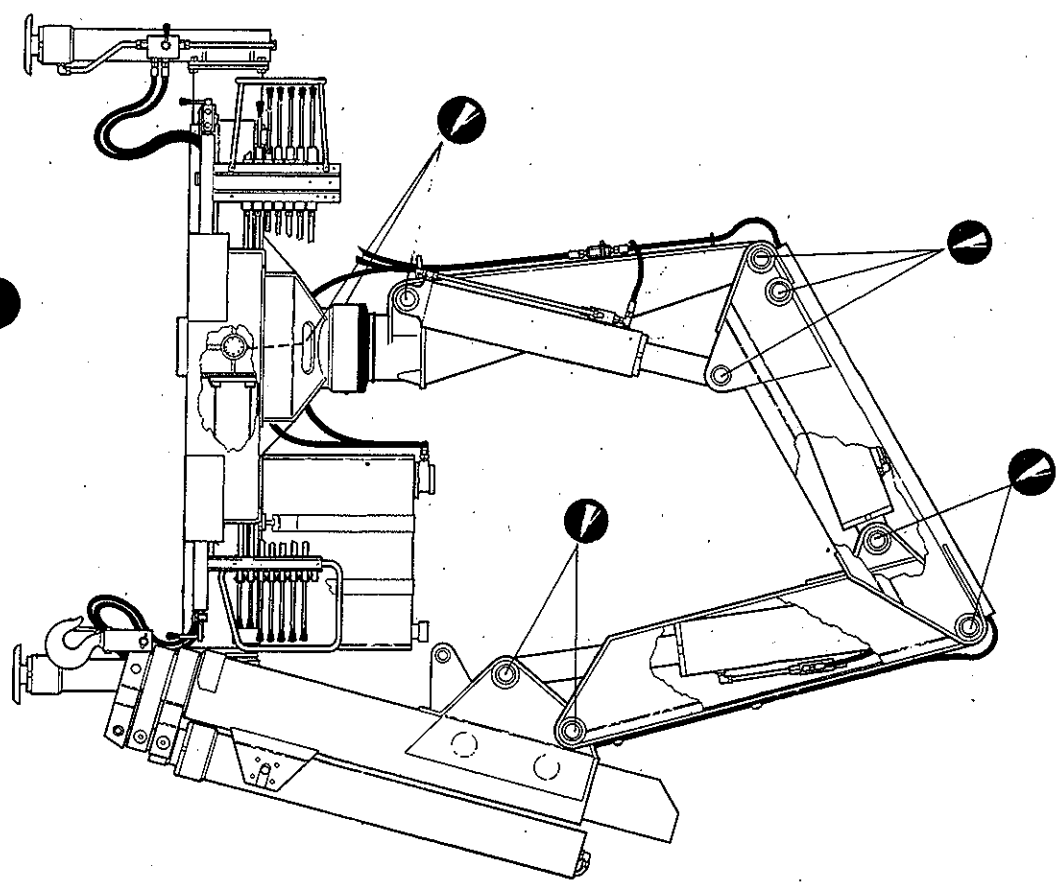
WINCH

The winch has its own lifting capacity shown on a separate plate, which can be higher than the capacity of the crane. Do not lift loads with the winch heavier than those shown on the crane radius plate. When winding the wire rope on to the winch barrel, check that the wire does not overlap itself, avoid rewinding if the wire is not sufficiently taut. After every 100 hours use, check the oil level inside the winch motor. After every 40 hours use, grease the pins and pulleys which guide the wire.

EXTENSIONS

Instructions for Mounting and Use

Manual extensions with self locking.
By placing the boom slightly off horizontal, these can be extended or re-extended. Take care not to extend or retract too fast, or the self locking devices will be damaged.



GREASING BY PRESSURE

(see instructions on page 8)

To avoid down time and repair work, the following periodic maintenance is suggested:

AFTER EVERY 40 HOURS USE

- Check the locking bolts and fixing rods of the crane on the chassis. Retighten if necessary.
- Clean the oil filter at the base of the crane.
- Clean the filter mounted on the suctionway. Sometimes this filter is not readily accessible and may be hidden by the truck chassis. If the hydraulic system for the crane is connected to that of a tipper, there could be an extra oil tank. Generally, where this is the case, the filter will be mounted on the extra tank. Remove the car-tridge, wash with petrol, and dry with compressed air.

- While the crane is folded, check that the level in the hydraulic tank is between minimum & maximum. When topping up use only the oil shown on the proper table.

- Grease all points as shown on page 7 including the points not easily visible. Spread grease on the surface of all telescoping booms to ensure easy movement (remove all sand, grit etc from these surfaces).

- Lubricate all jointed lever rods.

AFTER EVERY 500 HOURS USE

- Replace the filter element.
- Clean the air filter in the oil filter cap.
- Completely replace the hydraulic oil.

GREASING TABLE

Greasing:
Esso Multi Purpose Grease H
AGIP F1 Grease 18

Oil:
< - 15° C. ESSO NUTO HTS
— 15° C. + 35° C. ESSO NUTO H46
> + 35° C. ESSO NUTO H100

When industrial oil is not available use the following motor oil:

< - 15° C. ESSO HD5W
— 15° C. + 35° C. ESSO HD20W
> + 35° C. ESSO HD30

Industrial oil can't be mixed with motor oil.

PROBLEMS	CAUSE	REMEDY
The different booms of the crane won't completely extend during work, or working jerkily.	Temperature of oil too low Oil shortage Dirty oil filters Air inside the hydraulic system	Warm the oil by operating the crane for some minutes. Top up as necessary Clean the filters By moving the different levers operate all the rams reaching the dead points both ways.
Slow movements	Dirty oil filter	Clean the filter
Shift controls	Non lubricated joints	Lubricate joints & controls
The power take off does not engage	Fault pressure in the air system of the truck	Keep the r.p.m. of the motor to a good speed until the air pressure reaches 5-6 atm.
The crane does not lift the shown loads	Non efficiency of the pump General bypass not adjusted, blocked or broken Rams with worn out packings	Replace the pump Control the working pressure and adjust the valves Replace packings
Crane slewing erratic	Vehicle not in level position Flow regulator valve not correctly adjusted Anti shock valve non adjusted Worn out packing on the slewing cylinders Excessive clearance of the rack	Stabilize the vehicle Adjust the valve Adjust the valve Replace packings Regulate the clearance

N.B. The checking and adjustment of the pressure must be carried out by an authorised service centre. Failure to comply may nullify warranty.