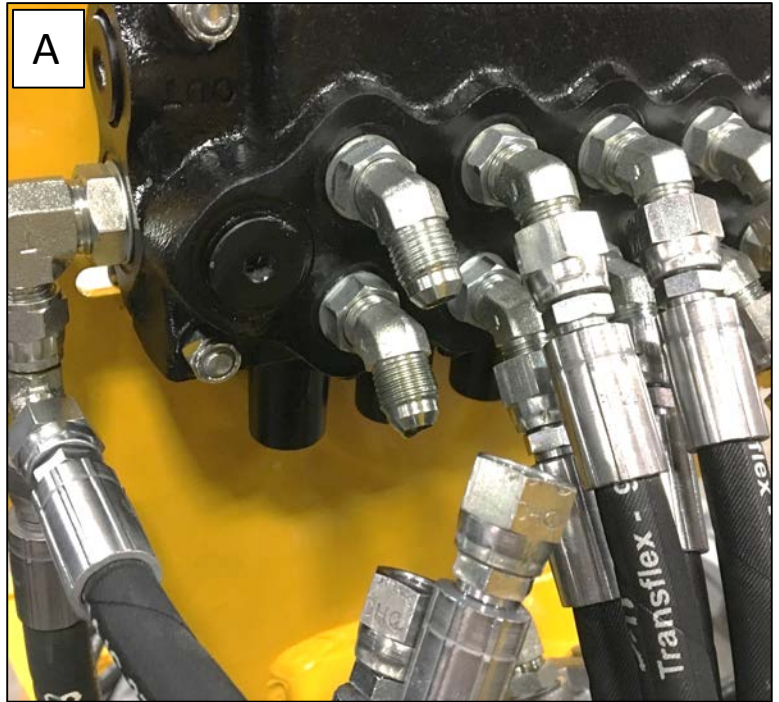


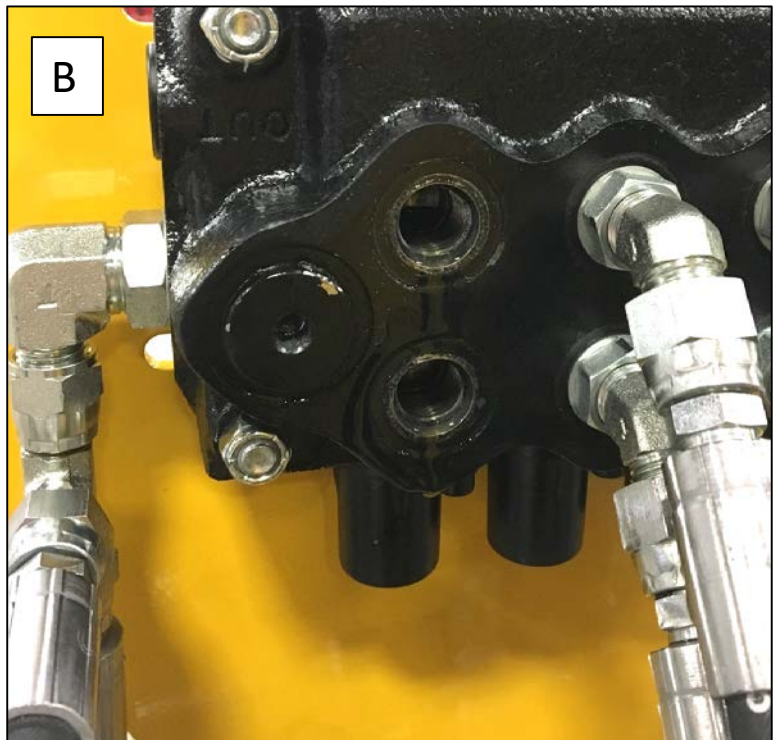
Adding a winch 400 on a M-90

1- Before to start the installation, be sure that the trailer is supported by its jack instead of the outriggers.

2- With a $\frac{3}{4}$ wrench, remove the hoses of the right side outrigger (A).

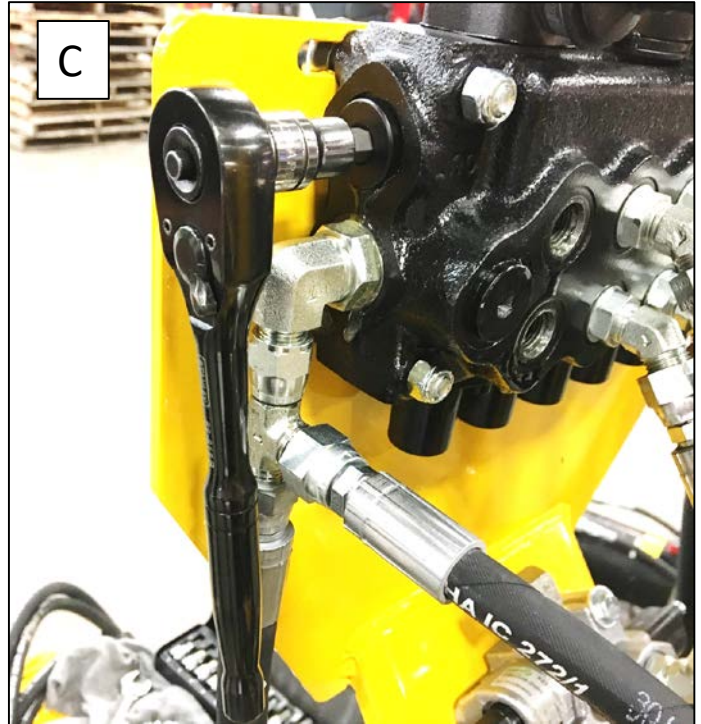


3- With a $\frac{11}{16}$ wrench, remove the fittings (B) of the right outrigger (temporarily).

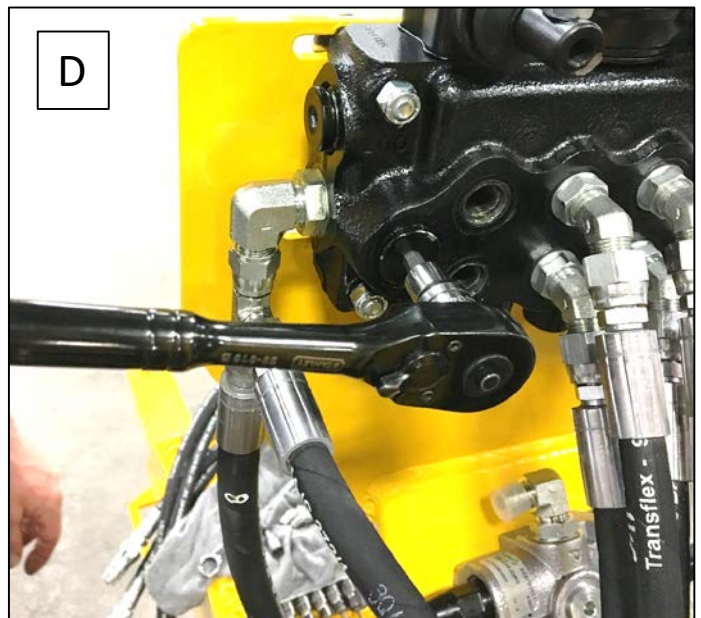


Adding a winch 400 on a M-90

4- With a 8 mm (or 5/16) Allen socket, remove the plug on the OUT upper side of the main valve (C).



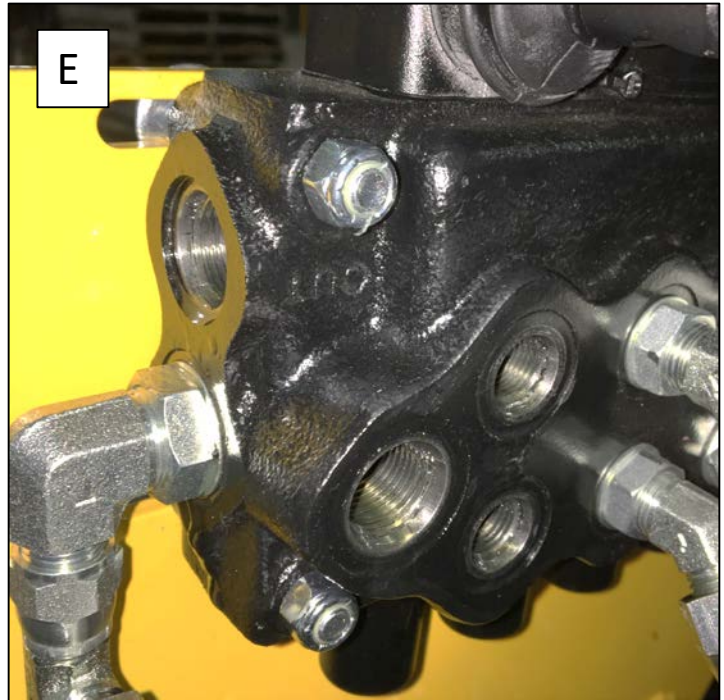
5- With a 6 mm (or 7/32) Allen socket, remove the plug (D) to the left of the previous removed fittings (step 3).



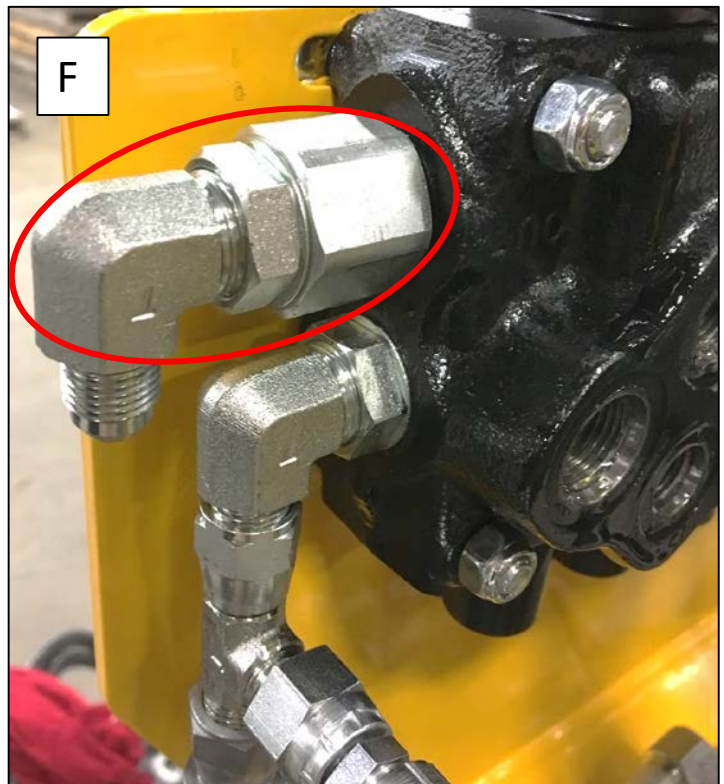
Adding a winch 400 on a M-90

Here is the valve now.
You may now to install the
provided fittings.

Note: If needed, with a $\frac{1}{2}$ wrench
and socket, loose slightly the 4
bolts that hold the valve to the
support for an easier installation.

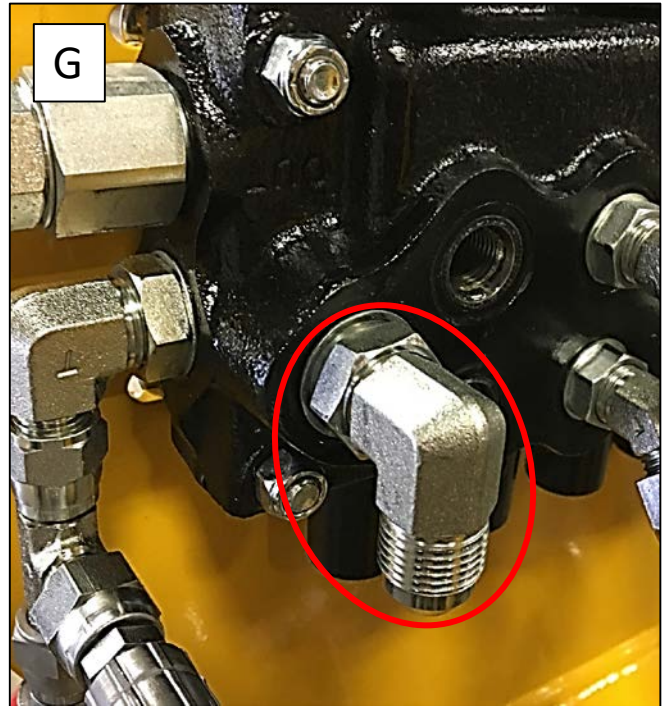


6- With a $1 \frac{1}{16}$ wrench , screw
the power beyond and the fitting
at the end, if not assembly (F) in
the main valve.

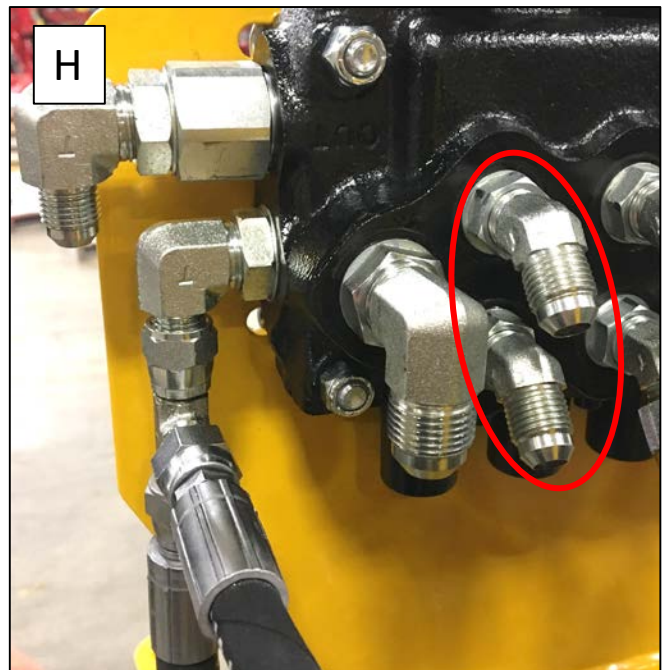


Adding a winch 400 on a M-90

7- With a $\frac{3}{4}$ and $\frac{7}{8}$ wrench, install the provided fitting as showed (G).

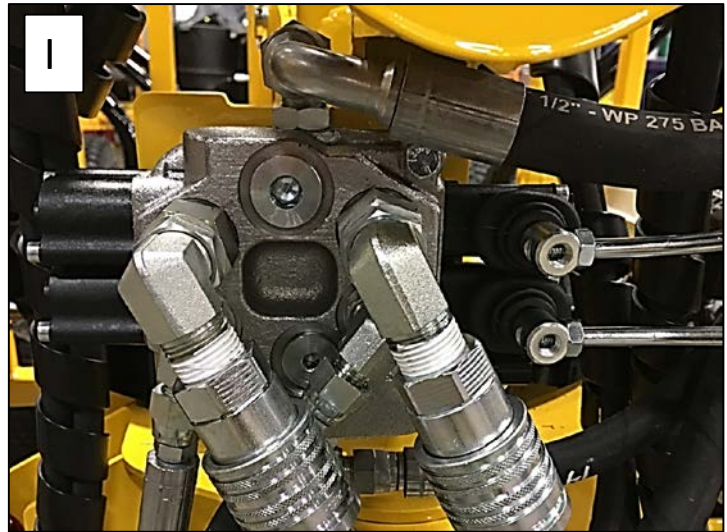


8- With a $\frac{9}{16}$ and $\frac{11}{16}$ wrench, reinstall the fittings of the outrigger by starting with the below one (H).



Adding a winch 400 on a M-90

9- With a $\frac{1}{2}$ socket and wrench, install the option valve (I) with the provided bolts.



10- With a 15/16 wrench, install the provided hose #13 that goes from the main valve (G) to the option valve (J). Install the 90° elbow side hose to the top fitting of the option valve.



Adding a winch 400 on a M-90

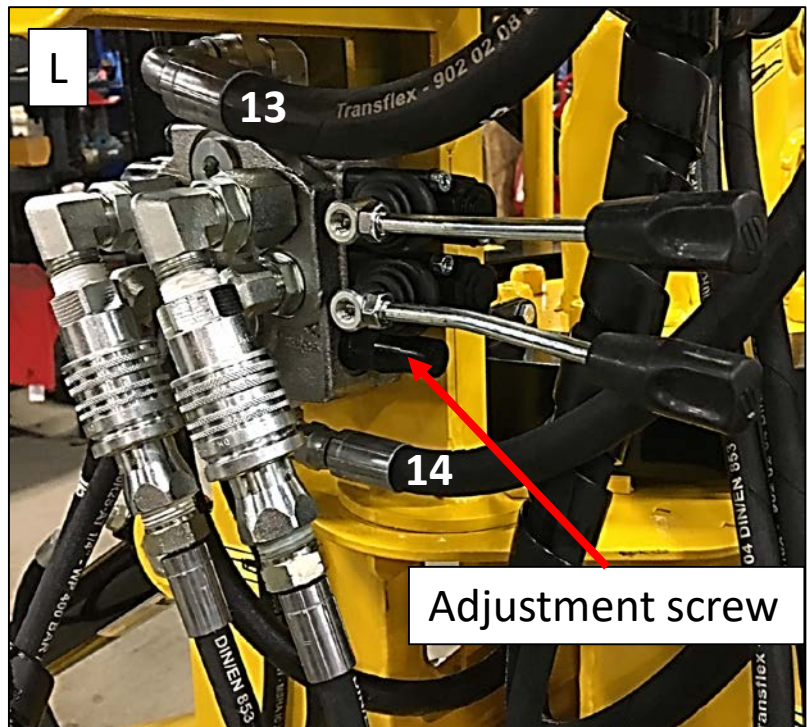
11- With a 15/16 wrench, install the hose #14 that comes from the main valve (F) in the bottom fitting of the option valve (K). If you have the option of hydraulic adjustable tandem, connect back the 2 hoses (15 and 16) in their initial place.



12- The winch will be connect to the 2 quick couplers. This way, if you add the hydraulic dumper, it will be possible to operate the 2 options alternately.

Note: The adjustment screw must be completely screwed in order to let the maximum pressure pass (J).

If the cable speed seems slow, verify with a 13 mm (1/2) wrench and an Allen key 4 mm (5/32).



Adding a winch 400 on a M-90

13- Install the provided spacer (M) on the left side of the winch.



14- Install the winch on the boom facing the holes. Screw on the provided bolts (1/2 X 6") with a 3/4 socket and wrench (N).



15- Install the pulley support with the provided bolts (1/2 X 4") to a distance of 8 1/2" from the winch (N) with a 3/4 wrench and socket.

Be sure that the pulley does not hit the stick cylinder.



Adding a winch 400 on a M-90

16- Screw completely the nuts (P) under the winch with a 9/16 socket.



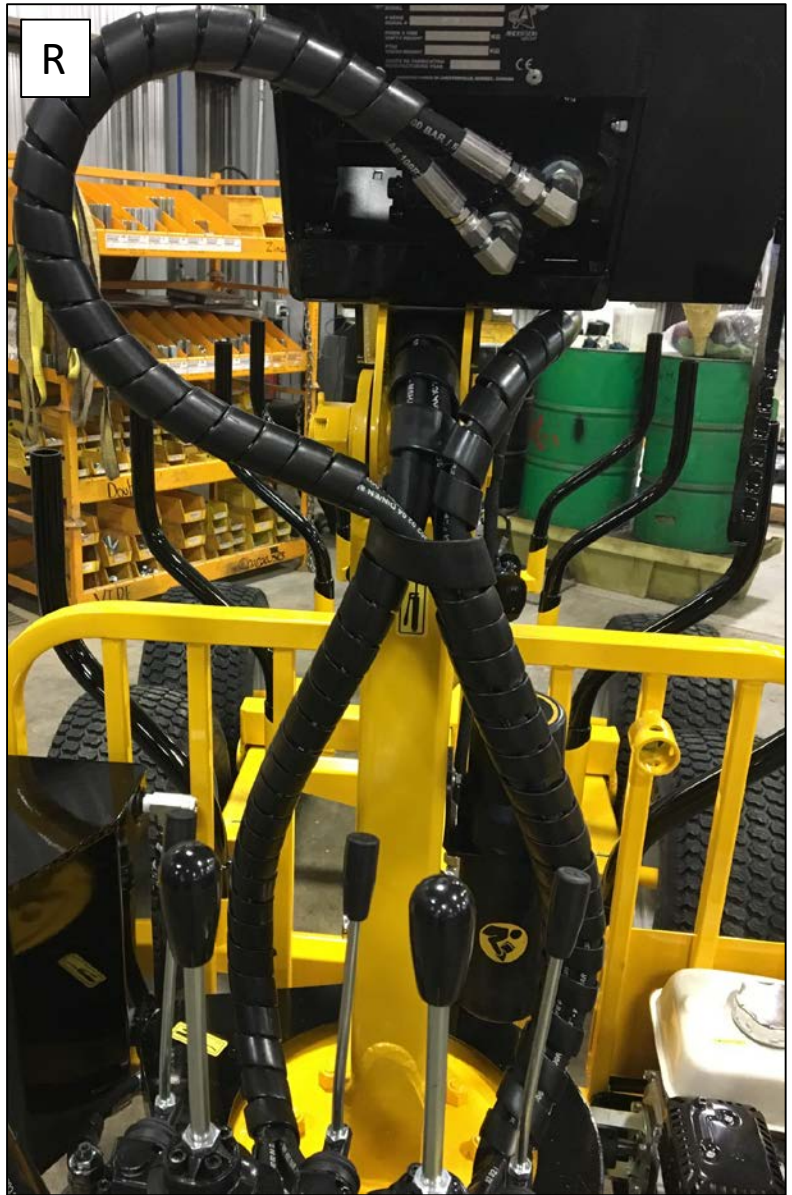
17- Connect the 2 provided #23 hoses until the option valve. Install the hose protector (spiral guard).

18- Attach those 2 hoses with the bunch already there (R).

It is important to do a test with the valve to know if it works in a good way. Alternate the hoses if needed.



Adding a winch 400 on a M-90



Needed tools:

- Wrenches 1 1/16, 7/8, 3/4, 11/16, 9/16 and 1/2;
- Socket 1 1/16 and 1/2;
- Socket Allen 8 mm (or 5/16), 6 mm (or 7/32) and 4 mm (or 5/32);
- Wire cutter pliers;
- Tape measure.

Required time:

- 60 minutes