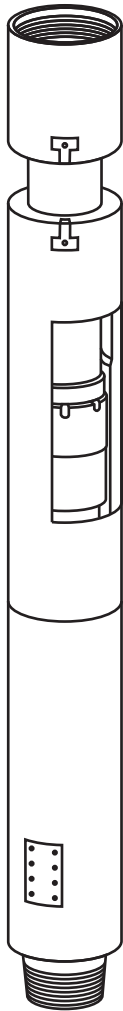


TOOL SIZE		CONNECTION	LENGTH	MAXIMUM JARRING LOAD	MAXIMUM PULL AFTER FULLY OPEN	MAXIMUM TORQUE	PULL TO SHEAR STRAP	BODY JOINT TORQUE
OD	ID							
7"	2"	5-1/2 Reg	13'	150,000 lbs	870,500 lbs	15,000 ft/lbs	20,000 lbs	13,000 ft/lbs
177.80 mm	50.80 mm		3.96 m	66,720 daN	387,198 daN	20,325 Nm	8,896 daN	17,615 Nm

NOTE: All specifications are accurate within 15%.



HYDRAULIC SURFACE JARRING PROCEDURES

The principal workings of a surface jar are such that they provide a means of developing a downward force of the drill pipe (Squat) to push down on the stuck point by downwards force only. The only time to use a surface jar is when you are stuck off bottom. It is not recommended that a surface jar be used after getting stuck tripping in the hole because in this case you need to jar upwards to free your drill string.

When to use a Surface Jar - assess your situation

1. Are you stuck off bottom? Were you going up or down when you got stuck?
2. If you can circulate you are quite likely stuck in a key seat, or are differentially stuck.
3. Is there any chance you may have washed out hole areas?
4. How much drill pipe is in the hole and consider the size of the pipe and also the size of the hole. Because it is possible to bend and break off drill pipe with a surface jar.
5. Try to determine the amount of free pipe in the well. If you are on a critical well you may consider running free point tools to determine stuck point.
6. Amount of Crown room.
7. There have been instances where after temporary shut downs during drilling operations that the pipe rams are closed and not re-opened prior to moving the drill pipe again.

RUNNING PROCEDURE FOR LEE OILFIELD HYDRAULIC SURFACE JAR

Hold safety meeting with oil company representative rig manager, crew and all others involved, explaining the hazards of utilizing a surface jar. In the Lee Oilfield hydraulic surface jar there is a safety shear strap across the opening of the tool at the top sub. This strap is to prevent the tool from opening during the time it takes to install the jar onto the stuck pipe. Because the jar is hydraulic it could eventually bleed off if left hanging long enough even with its own weight and free fall for 1.22 m (48"). Install safety clamp on top end of jar, but below the safety strap, pick up jar with winch line or blocks and place jar in mouse hole. When possible place a bar through the mouse hole just below the surface jar to prevent any possibility of it falling accidentally. A small amount of weight is recommended above the surface jar to assist in resetting if you have crown room. Pick up drill pipe, drill collar or pick up sub depending on crown room available. Tie the elevator handles together to prevent accidental opening during jarring.

Important: When torquing upper and lower tool joint connections, torque individually with a back up tong. Remove assembly from mouse hole and screw onto fish. Torque to specs. If it is convenient you can now remove the safety strap. If not you can shear it by pulling approximately 10,000 daN (22,482 lbs.) and shear it. After the strap is removed or sheared continue pulling to maintain approximately 10,000 daN (22,482 lbs.) and let the surface jar bleed open slowly. When the jar passes through it's restricted stroke it will free travel for approximately 1.22 m (48") more.

With the jar fully open pull enough weight to remove slips. Then set back down until the jar begins to close, pick up again until you just begin to see additional weight being lifted. Mark your pipe and record the weight indicator reading. (Should be as close to zero as possible). Then continue lifting and pick up estimated free string weight and mark the pipe again and record your weight again.

Close surface jar fully and pick up the desired amount of over pull and wait for the jar to release. Approximately 8,000 daN (17,985 lbs.) to 10,000 daN (22,482 lbs.) over estimated free string weight. After jarring light for a reasonable amount of time and you do not have any movement you can increase the jarring load and continue jarring. But never pull over your estimated free pipe weight because if you do you are only pulling tighter into your stuck point.

If the mark on the pipe begins to get lower, stop jarring and relax the string with the jar in the open position and watch to see if the string creeps downward. If it does you can reduce the jarring load because you are starting to free your Fish. If pipe does not creep down and the markings on the pipe are lower, pick up again to estimated free string weight and if the marks come back up to where they were when you started jarring stop jarring because this indicates that the pipe is bending but if the marks are staying lower this indicates the string is moving downward.

Note: If you desire to pump through the surface jar you can do so but before you begin pumping be sure the jar is in the fully extended mode. Do not exceed 30,000 kpa (4,351 psi). If you need to go higher remove the surface jar from the string prior to pumping.