### MOST OF OUR EQUIPMENT USES METRIC HEX KEY SCREWS OR BOLTS:

NEVER ATTEMPT TO REMOVE A SCREW WITH AN SAE HEX KEY SET

## **ONLY USE METRIC HEX KEY SETS**

IF A SCREW OR BOLT IS TIGHT USE PENETRATING LUBRICANT SUCH AS LIQUID WRENCH AND ALLOW 10-20 MINUTES OR LONGER PENETRATE INTO SCREW ASSEMBLY (REPEAT IF NEEDED) IF STILL HARD TO REMOVE HEAT THE OUTER PART OF AREA (AVOID HEATING SCREW) WITH A HEAT GUN TO EXPAND METAL THEN CAREFULLY REMOVE BOLT/SCREW TURNING IT JUST A BIT THEN BACK A BIT UNTIL LOOSE. USE A LIBERAL AMOUNT OF LUBRICANT

# IF YOU BREAK OR STRIP SCREW OR BOLT YOU WILL NEED TO FIND A WAY TO EXTRACT IT. THE FOLLOWING METHODS SHOULD HELP BUT IN RARE CASES YOU MAY NEED TO TAKE PART TO A MACHINE SHOP FOR REPAIR:

- 1. LUBRICATE AREA AROUNT SCREW WITH LIQUID WRENCH OR
  - THE LIKE (DO NOT USE PRODUCTS SUCH AS WD-40 THEY ARE NOT PENETRATING LUBRICANTS)
- 2. USING A SMALL STEEL DRILL BIT DRILL A SMALL HOLE IN TIP OF BROKE SCREW
- 3. USING A SCREW EXTRACTOR KIT FOLLOWING THE DIRECTIONS THEY PROVIDE TO EXTRACT SCREW
- 4. IF UNABLE TO REMOVE YOU MAY CHOOSE TO TAKE PART TO A LOCAL MACHINE SHOP OR JUST USE A HEAVY DUTY STEEL DRILL BIT AND DRILL OUT ENTIRE SCREW THEN USING A THREADING TAP & DIE SET TO RETHREAD SCREW HOLE. IF DOING THIS PROCESS BE SURE TO MATCH THE THREAD SIZE AND SCREW WITH THE NEW HOLE

# 1

Install the drill bit head on the electric drill



Reverse use the drill bit head with low speed and drill a deep hole



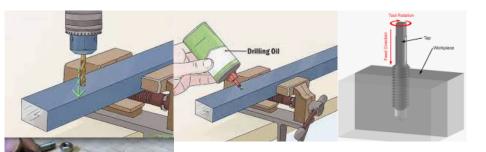
Take out and change to the extractor head



Still reverse use the extractor head with lower speed and take out the brocken bit

# **USING A TAP & DIE SET:**

(Check online videos on YouTube & follow MFG instructions)



FOLLOW MFG INSTRUCTIONS WHEN USING A TAP & DIE SET