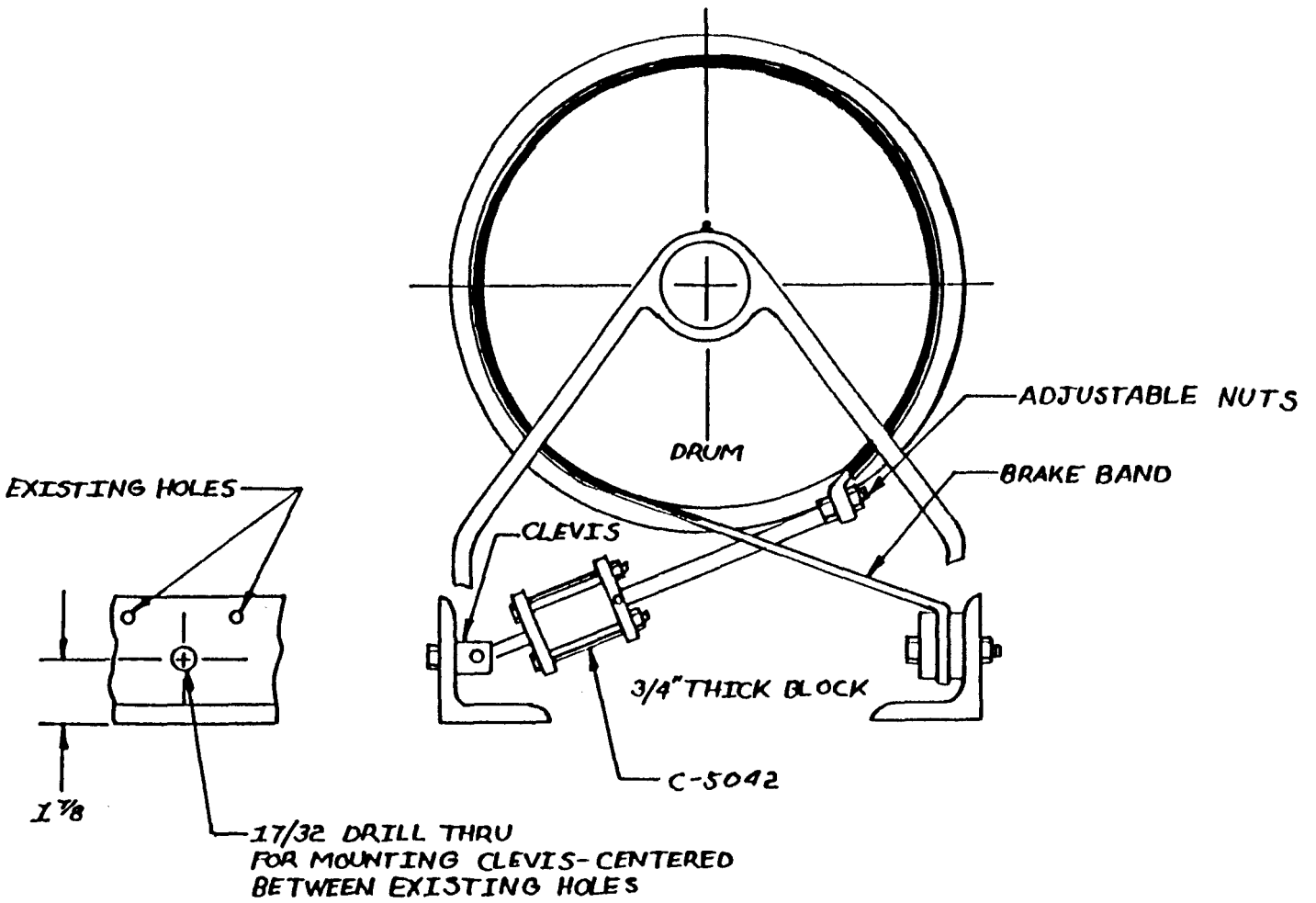


WT-23
BRAKE CONTROL KIT



FOR WT-23 BRAKE AND CLUTCH CONTROL KIT

INSTALLATION INSTRUCTIONS

GENERAL INFORMATION: AIR OPERATED BRAKE

DRUM BRAKES ON WINCHES ARE UNDERSTOOD TO BE THE TYPE DESIGNED TO PREVENT WIRE ROPE FROM "BIRD CAGING" (FREE SPOOLING, ALLOWING THE TANGELING OF WRAPS OR LAYERS) WHEN THE DRUM CLUTCH IS DIS-ENGAGED, SO THAT WIRE ROPE CAN BE FREE SPOOLED UNDER CONTROL OFF THE DRUM WITH NO LOAD ON THE WINCH. THE DRUM BRAKE IS NOT DESIGNED TO HOLD A LOAD.

THE BRAKE BAND BECOMES ENERGIZED AROUND THE DRUM WHEN THE BRAKE ROD IS PULLED WITH A "BELL CRANK ROD" AND LEVER MECHANICALLY. THIS LEVER CAN BE REPLACED WITH AN AIR CYLINDER. A SPRING EXTENDED CYLINDER IS PREFERRED WITH AIR RETRACTION. A DOUBLE ACTING CYLINDER CAN BE USED, WHICH IS INTENDED TO ASSIST THE SPRING IN RELEASING THE BRAKE. IF THE DOUBLE ACTING FEATURE IS NOT USED, THEN PIPE TAPPED HOLE FOR THE AIR LINE MUST BE LEFT OPEN TO ALLOW FOR EXHAUST ACTION OF THE SINGLE ACTING CYLINDER.

AIR CYLINDERS ARE NOT TO BE USED IN APPLICATIONS WHERE PERSONS ARE LIFTED, MOVED, UNDER OR BETWEEN LOADS OR FORCES.

1) WINCH PREPARATION-

REMOVE ALL CONTROL LINKAGE PARTS FOR CLUTCH AND DRUM BRAKE EXCEPT CLUTCH YOKE. RETIAN ANY SAFTY LOCKING DEVICES, SINCE THESE MUST BE IN PLACE AS MANUFACTURED WHEN INSTALLATION IS COMPLETE.

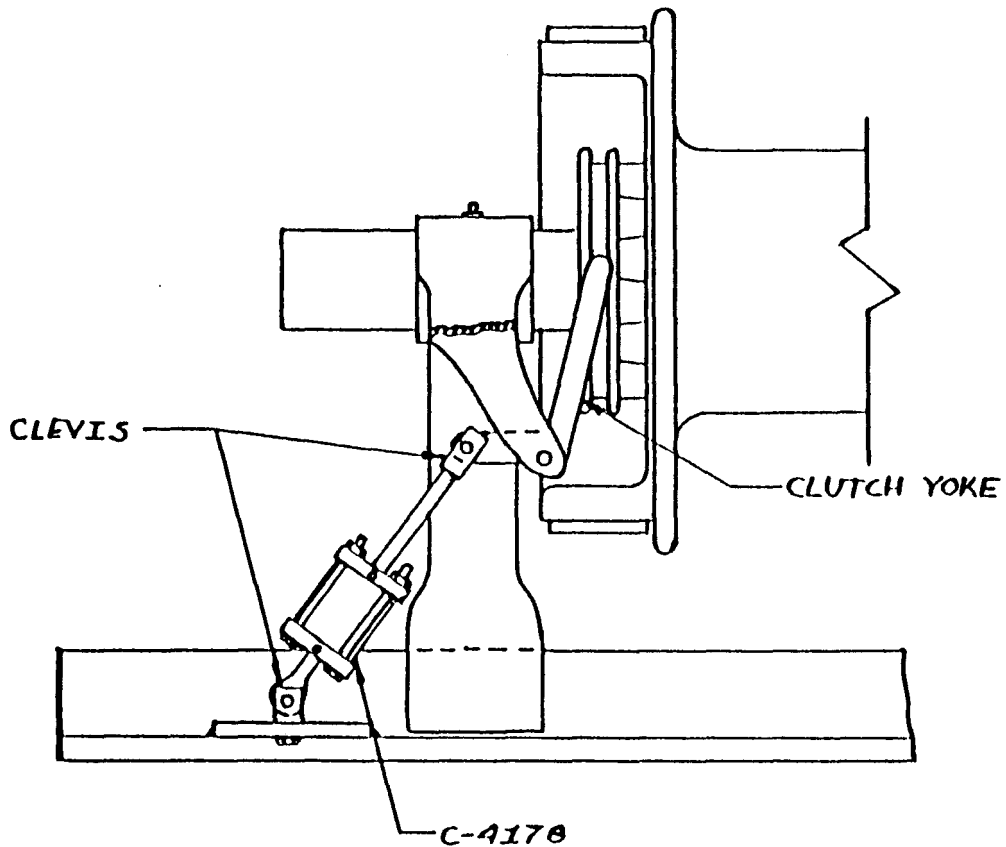
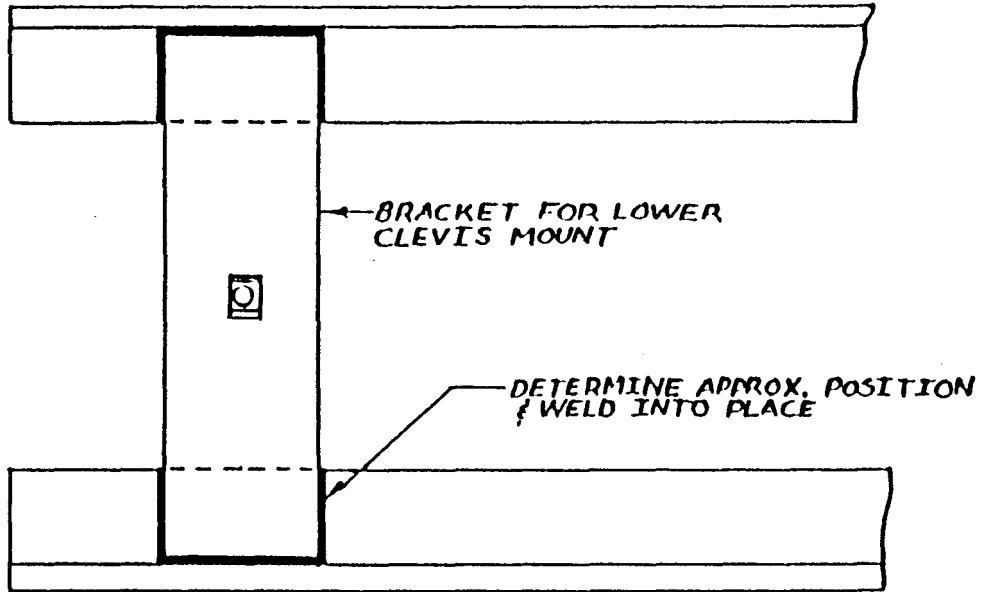
2) INSTALLATION OF DRUM BRAKE CONTROL-

- A) LOCATE AND DRILL 17/32" HOLE FOR MOUNTING CLEVIS. (SEE SKETCH)
- B) BOLT 1/2" CLEVIS TO WINCH ANGLE. CLEVIS PIN SHOULD BE HORIZONTAL WHEN INSERTED SO CYLINDER MAY MOVE FREELY IN VERTICAL DIRECTION. (SEE SKETCH) TIGHTEN BOLT TO CLEVIS SECURELY.
- C) REMOVE BRAKE BAND ANCHOR BOLTS, MOVE BRAKE BAND TO INSIDE OF ANGLE, INSTALL 3/4" BLOCK ON INSIDE OF BRAKE BAND. (SEE-SKETCH) BOLT INPLACE USING TWO 1/2" CAPSCREWS W/ LOCKWASHERS AND NUTS, TIGHTEN SECURELY.

NOTE: THIS CHANGE IS ONLY REQUIRED TO ALLOW PROPER CLEAR-ANCE FOR THE PISTON ROD THROUGH THE BRAKE BAND, MAY NOT BE NECESSARY FOR ALL APPLICATIONS.

- D) INSTALL CYLINDER BY SLIDING THE PISTON ROD THROUGH THE BRAKE BAND SLOT. CONECT THE CYLINDER TO THE CLEVIS. PLACE ONE NUT ONTO THE PISTON ROD. INSERT ROD THROUGH MOUNTING HOLE IN THE BRAKE BAND, PLACE THE OTHER NUT ON THE ROD. ADJUST NUTS SO THE BRAKE BAND DOES NOT GRIP DRUM UNTIL CYLINDER IS ACTIVATED.

WT 23
CLUTCH CONTROL KIT



GENERAL INFORMATION: AIR OPERATED CLUTCHES

WINCH MANUFACTURERS DESIGN DRUM CLUTCHES TO BE FULLY ENGAGED OR DIS-ENGAGED BEFORE OPERATING THE WINCH. ANY DEVICE TO ASURE THIS FEATURE MUST NOT BE OVERRIDDEN, OR TAMPERED WITH, BY THE ADDITION OF AN AIR SHIFTING DEVICE. AIR CYLINDERS, BOTH DOUBLE ACTING OR SPRING RETURN SINGLE ACTING, ARE FOR COMPLETE CLUTCH TRAVEL EACH WAY. PARTIAL ENGAGEMENT OR DIS-ENGAGEMENT MUST NOT OCCUR. LOCKING DEVICES MUST REMAIN IN PLACE AND OPERATABLE AT ALL TIMES. SPRINGS USED IN AIR CYLINDERS TO ENGAGE OR DIS-ENGAGE DRUM CLUTCHES ARE IN ADDITION TO, AND MUST BE DESIGNED TO COMPLY WITH, FORCES DESIGNATED BY THE WINCH MANUFACTURERS.

3) INSTALLATION OF DRUM CLUTCH CONTROL-

- A) MAKE SURE CLUTCH IS ENGAGED, PIN THE PISTON ROD CLEVIS TO THE CLUTCH YOKE. (SEE SKETCH)
- B) INSTALL LOWER CLEVIS TO THE BRACKET PROVIDED. PIN THE OPPOSITE END OF THE CYLINDER TO THE LOWER CLEVISE. CLUTCH SHOULD BE FULLY ENGAGED, HOWEVER THE YOKE SHOULD NOT EXERT ANY FORCE ON THE CLUTCH DOG WHEN CLUTCH IS ENGAGED. NEXT PLACE THE LOWER CLEVISE BRACKET ON THE TWO LARGE ANGLES, POSITIONING IT FLAT AND SQUARE. WELD INTO PLACE.

NOTE: ANY SAFTY LOCKING DEVICES INSTALLED BY MANUFACTURER MUST NOT BE REMOVED OR OVERRIDDEN BY THE INSTALLATION OF THE AIR CYLINDER.

CAUTION: PARTIAL ENGAGEMENT OR DIS-ENGAGEMENT OF THE DRUM CLUTCH MUST NOT OCCUR UNDER ANY CIRCUMSTANCES. ONLY OPERATORS EXPERIENCED ENOUGH TO UNDERSTAND THIS REQUIREMENT SHOULD OPERATE THIS EQUIPMENT. THOSE ASSISTING THE OPERATOR MUST BE INFORMED BY THE OPERATOR OF THE POTENTIAL DANGERS OF PARTIAL ENGAGEMENT. ADDITIONLY, NO PERSON SHOULD BE IN OR NEAR A MOVING LOAD OR HOOK.

4) INSTALL CONTROL VALVE IN DESIRED POSITION USING TWO 1/4" CAP-SCREWS. ROUTE TUBING AND CONNECT POWER SUPPLY. TEST FOR PROPER OPERATION.

NOTE: CLUTCH SHOULD DIS-ENGAGE FIRMLY AND COMPLETELY WHEN AIR PRSSURE IS APPLIED AND SPRING BACK TO THE ENGAGED POSITION WITHOUT FORCE BEING EXERTED ON THE CLUTCH DOG BY THE YOKE WHEN PRESURE IS RELEASED. AIR PRESSURE IS APPLIED TO AID THE SPRING IN ENGAGING THE CLUTCH. (MINOR ADJUSTMENTS CAN BE MADE WITH CLEVIS ON CYLINDER PISTON END.)

WT-23 CONTROL KIT
SYSTEM DIAGRAM

C-5042

C-4178

