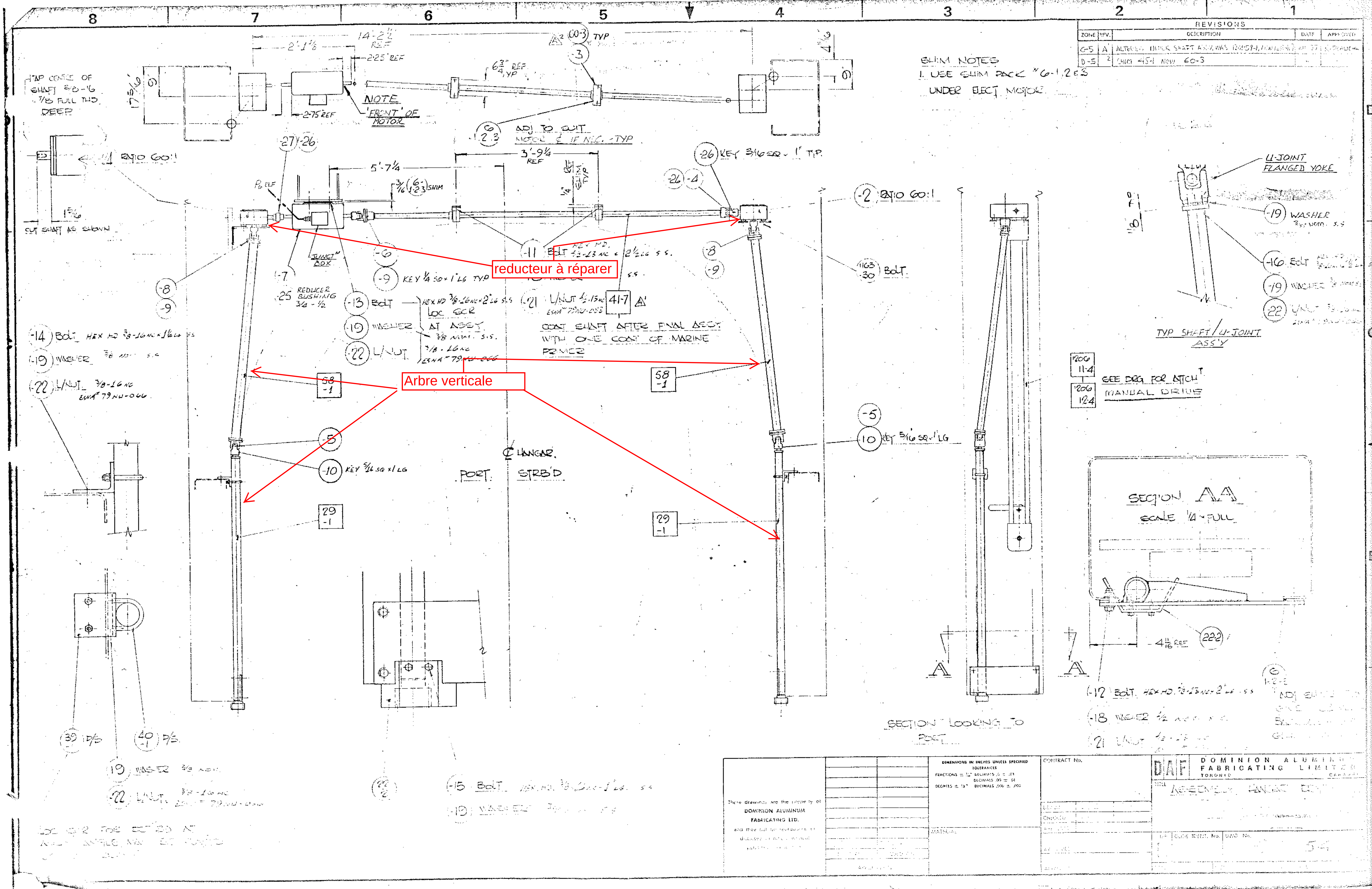

REVISIONS
ZONE
REV.
DESCRIPTION
DATE
APPROVED
SHIM NOTES
1. USE SHIM PACK "6-1,2 & 3
UNDER ELECT MOTOR
TAP CENTRE OF SHAFT 3/8-16 7/8 FULL THD DEEP
NOTE FRONT OF MOTOR
ADJ TO SUIT MOTOR & IF NEC. - TYP
RATIO 60:1
CUT SHAFT AS SHOWN
KEY 3/16 SQ x 1" TYP
JUNCT BOX
REDUCER BUSHING 3/4 - 1/2
KEY 1/4 SQ x 1" LG TYP
BOLT
WASHER
L/NUT
LOC GCR
AT ASSY
COAT SHAFT AFTER FINAL ASSY WITH ONE COAT OF MARINE PRIMER
reducteur à réparer
Arbre verticale
U-JOINT FLANGED YOKE
WASHER
TYP SHAFT/U-JOINT ASS'Y
SEE DRG FOR ATTCH MANUAL DRIVE
KEY 5/16 SQ x 1" LG
℄ HANGAR
PORT
STRB'D
SECTION AA
SCALE 1/4 = FULL
SECTION LOOKING TO PORT
DIMENSIONS IN INCHES UNLESS SPECIFIED
TOLERANCES
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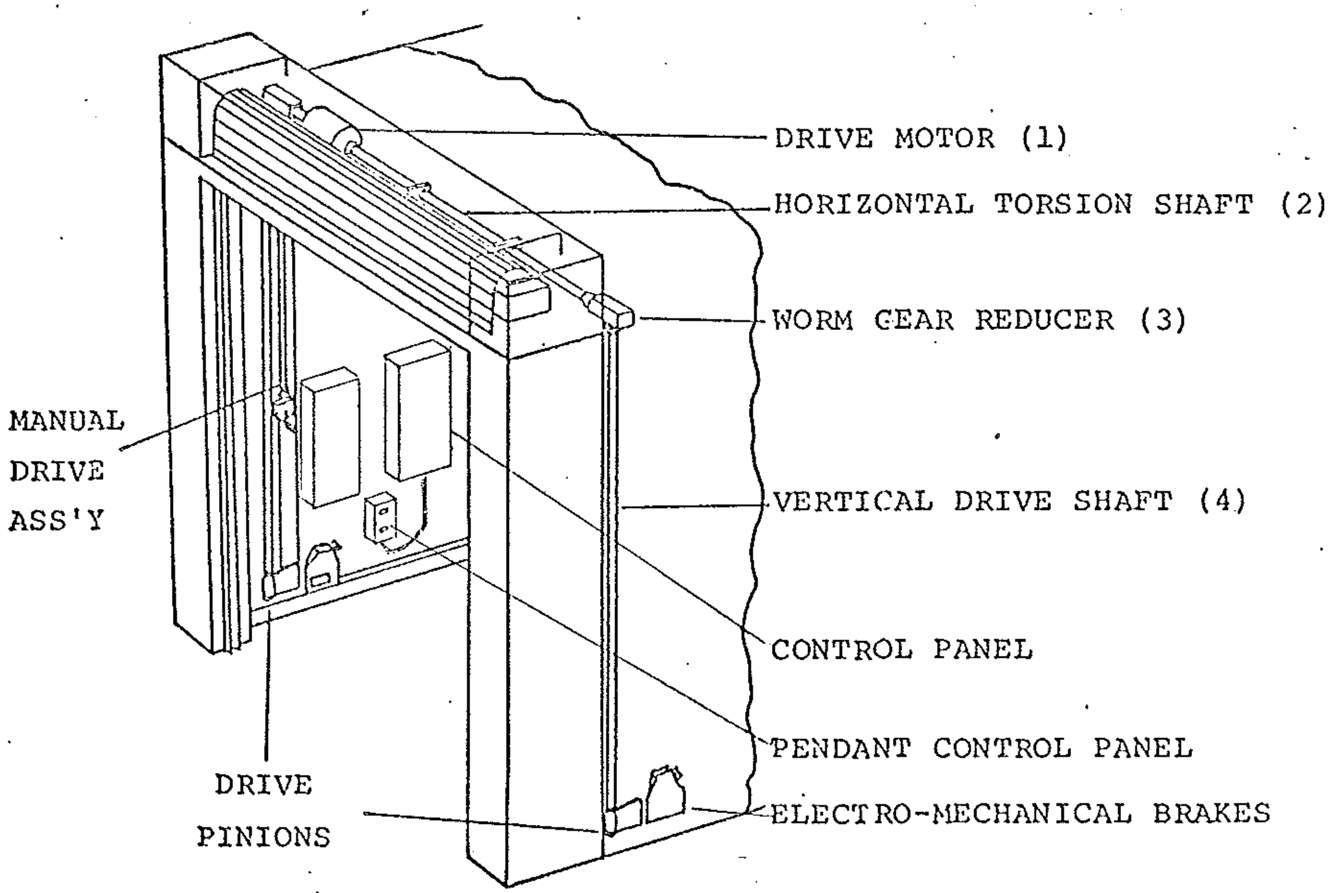
CONTRACT No.
DAF
DOMINION ALUMINUM FABRICATING LIMITED
TORONTO
CANADA

3-1 HANGAR TRAVERSE - ELECTRICAL (Figure 3-1)

3-1-1 General

Refer to the referenced figure. The hangar drive system comprizes the electric motor, electromechanical brake, power controls, drive shafts and linkages which combine to provide rotation of pinion gears meshed with the continuous rack installed on the inner side of the hangar tracks.

3-1-2 Electrical power (see Figure 3-3) is controlled from pushbuttons on a hand control unit which connects to the starter control panel via a ten foot pendant cable. When depressed, the pushbuttons energize a starter contactor, connecting 440v 60 Hz 3 phase power to the motor terminals. The motor is dual shaft with power take-off at each end. Torque is transmitted via universal joints and torsion bars to 60:1 ratio worm gears where the motion is transferred to vertical torsion links. Pinion gears attached to the end of each vertical link, mesh with the continuous gear racks assembled on the inside of the inner tracks, thereby transferring pinion rotation into linear movement of the hangar.



Hangar Traverse
Figure 3-1

3-1-3 Electromagnetic brake units located on the lower wall of the lead section are electrically coupled to the drive motor terminals. The brakes prevent traverse of the hangar while the motor is not operating.

3-1-4 Drive Motor (Figure 3-1)

The hangar is traversed by a single induction motor (1) rated at 2 HP. It requires a three-phase supply of 440 VAC, 50/60 Hz and has a rotation speed of 1725 rpm. Clockwise and counter-clockwise rotation are achieved by operation of two pushbuttons which change the phase relationship of the motor supply through AC contactors. The rotor shaft of the drive motor protrudes beyond the end of the motor casing in both directions. The motor, which is enclosed in a spray-tight casing, incorporates a cooling fan on its rotor. Replaceable bearings are used at both ends. The motor is attached to the forward face of the door enclosure.

3-1-5 Horizontal Torsion Shaft (Figure 3-1)

The horizontal torsion shaft (2) connects the motor rotor shaft to gear reducers (3) located at each side of the hangar door frame. Universal joints allow torque transfer to the reducers while compensating for axial and angular misalignment of the coupled shaft. Each universal joint contains a lubrication fitting.

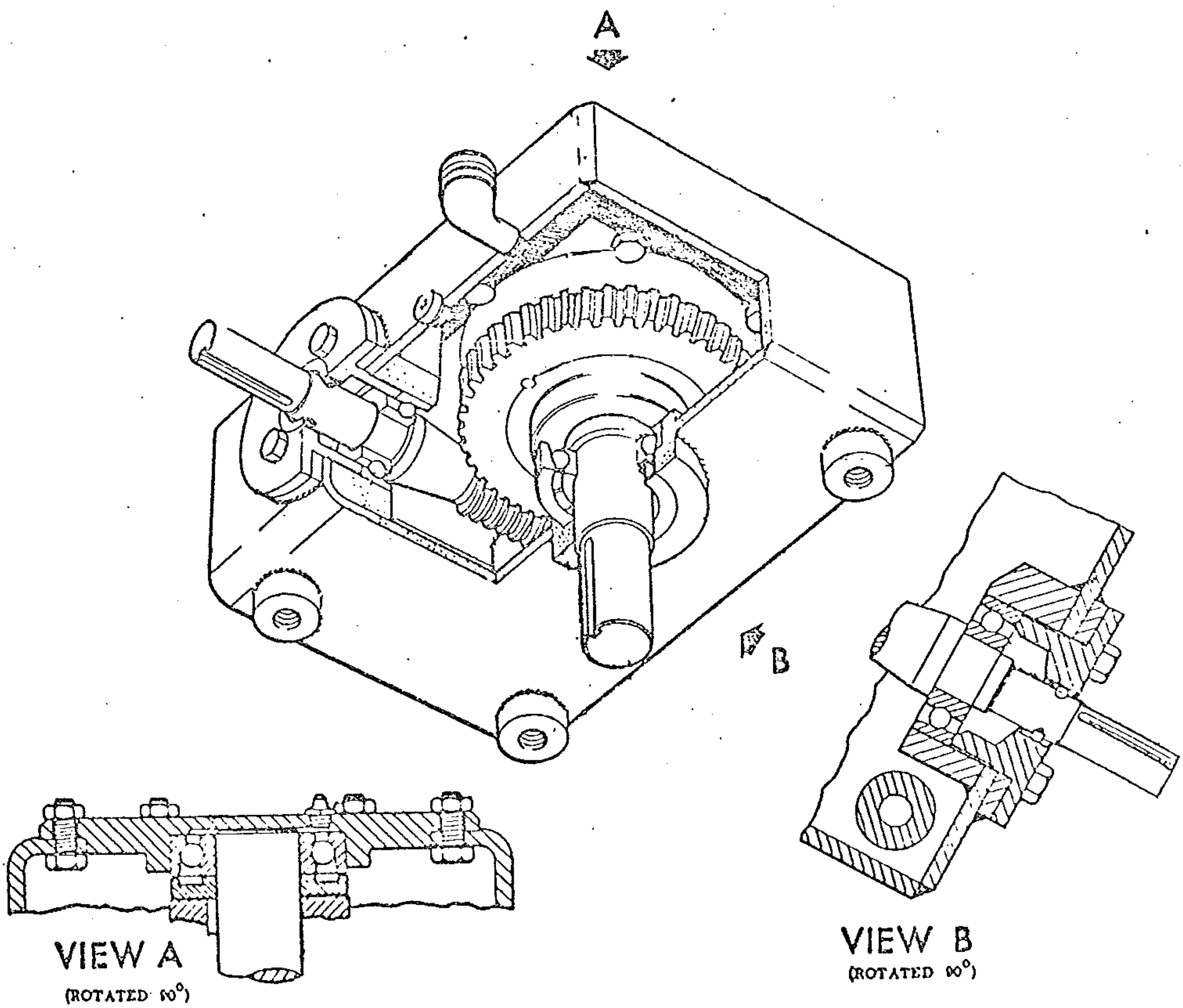
3-1-6 Vertical Drive Shafts (Figure 3-1)

The vertical drive shaft (4) are connected to the gear reducer output shafts through universal joint couplings. The couplings are virtually identical to those used in the horizontal shaft. The vertical shafts are split into two sections, coupled together via the yokes of a second universal joint. The lower section is held captive to the hangar structure by an angle plate and U bolt. A pinion gear is fitted to the lower end of the shaft and meshes with the gear rack located on the track assembly. The pinion gear is a standard 5 diametrical pitch 20^{o} pressure angle 1-3/4 inch bore.

3-1-7 Gear Reducer (Figure 3-2)

The vertical worm gear reducer assemblies provide a nominal 60:1 reduction in motor speed through a single reduction gearing. The input and output shafts are at right angles to each other with displaced axes. Oil bath lubrication is provided for all gears and bearings. A grease fitting is provided for the uppermost bearing since it is above the oil level. Each gear reducer is housed in a fabricated steel casing and includes a drain port and combination filler-level indicator.

The port side gear box contains an extension to the drive shaft which protrudes through the casing and is fitted with a gear to provide interconnection with the manual hangar drive system.



Worm Gear Reducer 60:1 (Port side shown)
Figure 3-2