INITIAL START-UP

IMPORTANT – THIS INITIAL START-UP INSTRUCTION IS TO BE USED BY THE YORK START-UP ENGINEER TO INITIALLY START UNIT IN ACCORDANCE WITH THE YORK CONTRACT. ANY ATTEMPT TO INITIALLY START UNIT, WITHOUT THE ASSISTANCE OF THE YORK START-UP ENGINEER WILL VOID YORK'S RESPONSIBILITY IF DAMAGE OCCURS, UNLESS OTHERWISE AGREED UPON.

THE INITIAL START-UP INSTRUCTION IS TO BE USED IN CONJUNCTION WITH THE INSTALLATION INSTRUCTION 160.71-N1 AND OPERATING AND MAINTENANCE INSTRUCTION FORM 160.71-01.

THE YORK START-UP ENGINEER SHALL INSTRUCT OPERATING PERSONNEL IN THE OPERATION OF THE UNIT AND THE USAGE OF THE OPERATING AND MAINTENANCE INSTRUCTION FORM 160.71-01 BEFORE LEAVING THE JOB SITE.

PURPOSE

The purpose of this instruction is to supplement the installation instructions by advising YORK Personnel of the factory recommended procedures for properly installing and aligning couplings, doweling of compressor, speed increasers and drivers, handling, checking, testing, prestart-up operation and initially starting a YORK OM TURBOMASTER Unit. Each OM TURBOMASTER contract for installation within the Continental United States includes services by an Authorized YORK Representative to check each installation, make the initial start-up and instruct operating personnel.

OM TURBOMASTER Units are field erected and require very careful inspection of the installation by the YORK Start-Up Engineer.

PRE START-UP INSTALLATION PROCEDURES

INSTALLATION AND FINAL ALIGNMENT OF FLEXIBLE COUPLINGS.

After the drive line base has been located on its isolators, blocked per the installation instructions and all equipment field installed on the base, the flexible coupling or couplings should be accurately aligned (Refer to Form 160.71-N2). (If mounted on a concrete base the grout layer should have been poured before porceeding with coupling alignment.)

The low speed coupling may be any one of several different types.

The high speed coupling (between speed increaser, or turbine, and compressor) is supplied by YORK, since this coupling must be capable of withstanding the high speeds of rotation at which the compressor operates.

To prevent excessive wear, both couplings should be aligned with the same care and accuracy as a fixed coupling.

Remember that the speed increaser or turbine must be misaligned to allow for expansion as the turbine or speed increaser, warms up during operation.

To install and align the low speed coupling, carefully follow the manufacturer's instructions, for the particular coupling. (see 160.71-N2 for low speed coupling alignment)

To install and finally align the high speed coupling follow the steps outlined in Form 160.71–N2 which covers the details of the high speed flexible coupling.

DOWELING THE EQUIPMENT

After the equipment has been aligned, but before the unit is charged, the feet of the components must be doweled to maintain the alignment.

Two dowel pins with a No. 2 Morse taper are furnished for each piece of equipment to be doweled, except turbines where special dowel pins may be required.

To properly dowel the equipment proceed as follows:

1. Drill the two diagonally opposite mounting feet of the speed increaser and driver. Drill the compressor feet at the coupling end in accordance with the drawings.

   NOTE: Speed increasers are furnished with ½" lead holes drilled through the mounting feet.

2. Using a No. 2 Morse taper reamer (roughing and finishing), carefully ream the 9/16" holes until the dowel pins drive tight with approximately ¾" of the taper protruding.

   NOTE: Some catalogs may list "Morse Taper Reamers" to differentiate from other tapers.

3. Within two weeks of normal operation, make hot alignment check, final alignment, then the dowel pins should be removed and the holes finish reamed for full depth seating.

CHECKING FOR PIPING STRAIN

After making final alignment of the prime mover to the compressor and after the piping to and from the condenser and cooler is completed, the following check for piping strains should be made:

1. Loosen the flange bolts of the compressor suction and discharge connections. If the flange faces are parallel and the bolts are free in their holes, piping strain is not apparent, tighten the bolts. If faces are not parallel or bolts are bound in the hole, piping strain is apparent and