ICRA SERVICE BULLETIN

7 May 2007

Recent discussions among members that remanufacture the 5H120 / 126 compressor revolved around a problem that has existed when using the 5H120-A773 oil pump assembly, and failure rate at first start up or early in it's life.

This prompted one member to provide a correction (as well as an explanation of what was causing the failure) that has been used in his shop (successfully) for several years now. That procedure is enclosed as a separate sheet to this bulletin.

Right now let's look at the oil pump history, and some of the items of possible concern. Looking at the history of the oil pumps used on these compressors

Prior to 1960, The 5H120 used bearing head part # 5H120-747, this bearing head had a housing bore of 1.75" and used the 5H120-A372 oil pump, and all know the problems that ensued with that item. This bearing head will accept the 06LA660-008 oil pump and works very well.
Then in 1960 the OEM began replacing the 747 bearing head with the 5H120-837 bearing head (this is the current head that the OEM will ship for replacement). This bearing head has a housing bore of 2.19" and ONLY the 5H120-A773 oil pump will work in this application.(This is the pump that needs very close inspection see repair note enclosed)

Now to add some confusion to the above conditions, the OEM has issued two bulletins that are somewhat contradictory, (both are enclosed, OEM-99 dated 5/20/86, and PMB89-128 dated 8/25/89) However, note, that you can use the 6L bearing head (6L120-223) on either the 5H or the 6L using the 06LA660-008 oil pump (6gpm)
Thus if you have bearing heads (either 6L or 5H) with a housing bore of 1.75", they can be used on the 5H120/126 compressors (using the 06LA660-008 pump)

If the bearing heads you have in hand, have the 2.19" housing bore, the only pump you can use there is the5H120-A773 pump assy. (5gpm)

Should you have in hand some of the older 6L bearing housings that have a 1.5" bore, these can be bored to 1.75", and used , using the 06LA660-008 pump assy.
Enclosed
OEM bulletin 99
PMB89-128
Fig 35 5H120-837 bearing head data
Fig 1 5H120-A372 Oil Pump (Obsolete and no longer available)
Fig 2 6L120 252 Oil Pump (Replaced by 06LA 660-008 Pump Assy.)
Fig 3 5H120-A773 Oil Pump, used in bearing head 5H120-837 with bore of 2.19"
Fig 4 6L120 252 Oil Pump, still available can be used with 6L bearing head with 1.5" bore
Fig 5 06LA 660 008 Oil pump, for use with any 5H – 6L bearing head with a 1.75" bore Bearing heads 5H120-747 or 6L120-223
Photo's of repair procedure and sketch of outer gear with 2 holes, (latest gear has 4 holes)

ICRA SERVICE BULLETIN

5H120-A773 OIL PUMP INSPECTION AND TEST METHOD

1. Pump inspection
   a. With the bushing (5H120-7052) driving disc (5H120-A352) and outer gear (5H120-7022) in place in the housing, there should be between .002 and .003" clearance between the outer gear and the housing assembly
   b. If this clearance is not present, you have a defective pump

2. With a black marker, blacken the outside edge of the outer gear(5H120-7022) see figure 3, reassemble the pump, then using needle nose pliers, turn the disc assembly a few turns, remove the outer gear, and where the black has been rubbed off, is the offset area.

3. Using a fine grit sander, carefully grind outer gear down to desired clearance of .002 to .003"

This procedure has been proven many times in both shop and field action.

Later information from the field, indicates that the replacement part # 5H120-7022, is now appearing with four (4) drive holes in the segment, with two of them having an X, indicating not to use those for positioning. (will not fit into housing properly)

TECHNICAL

REPLACEMENT COMPONENTS DIVISION

Subject: 5H120/126, 6L AND 06L OIL PUMP CLARIFICATION

File: PMB89-128 Date: 8/25/89 Author: GARY DECARR

This PMB supersedes PMB87-32.

Over the years the 5H120/126, 6L and 06L compressors have established themselves as workhorses in the air conditioning and refrigeration industry. These designs have seen relatively few changes since their inception. However, one area, selecting an oil pump for the subject compressors, can be confusing. The confusion may be the result of a change which occurred when the compressor was remanufactured or field repaired. (The parts catalogs for these compressors reflect only production serial number data, whereas remanufactured compressors are assigned current day serial numbers. Therefore, it is difficult to track compressor oil pump changes through the use of serial numbers.)

The purpose of this PMB is to alleviate the confusion surrounding the oil pump changes in the 5H120/126, 6L and 06L product line.

Today RCD services the majority of 5H120/126, 6L and 06L compressors with three oil pumps. These oil pumps have three different body diameters:

PART NUMBER	FIG.	*BODY DIAMETER
6L45-252	4	1.5"
06LA660008	5	1.75"
5H120-A773	3	2.187"

* These are reference dimensions as are the dimensions on the attached outline drawings.

Please note that PMB87-32 had stated that the original 5H120 oil pump, 5H120-A372, is replaced by 06LA660008 This is not the case. The 06LA660008 will not mount to the original 5H120 bearing head. The 5H120-A372 oil pump is replaced by the 5H120-837 bearing head assembly. (5H120-837 contains the 5H120-A773 oil pump.)

FIGURE 1

The 5H120-A372 is the original 5H120 oil pump (manually reversible). It was used on compressors manufactured prior to 1960. This oil pump is no longer available from service parts. The service replacement for this pump is the 5H120-837 bearing head assembly. This assembly contains the 5H120-A773 oil pump.

FIGURE 2

The 6L120-252 automatically reversible oil pump was used on 8 and 12 cylinder 6L/06L compressors until October 1976. It was also used on the 5H120/126 compressors from 1960 to 1968. This pump is no longer available from service parts. The current service replacement is 06LA660008. See Fig. 5.

FIGURE 3

The 5H120-A773 manually reversible oil pump was used in 5H120/126 compressors manufactured from 1968 to 1986. This pump is currently available from service parts.

FIGURE 4

All 6L and 06L four and six cylinder compressors have been built with the 6L45-252 oil pump. This is an automatically reversible pump. It is currently available from service parts.

FIGURE 5

The 06LA660008 is an automatically reversible oil pump. It has been used in the manufacture of 06L eight and twelve cylinder compressors since 1976. 5H120/126 compressors began to use this pump in production in 1986. It is used when changing out a 6L120-252 pump.

All attempts have been made to present past history as accurately as possible. If you should have any questions regarding this PMB, please do not hesitate to contact me.

File this PMB in your Compressor Handbook for future reference.

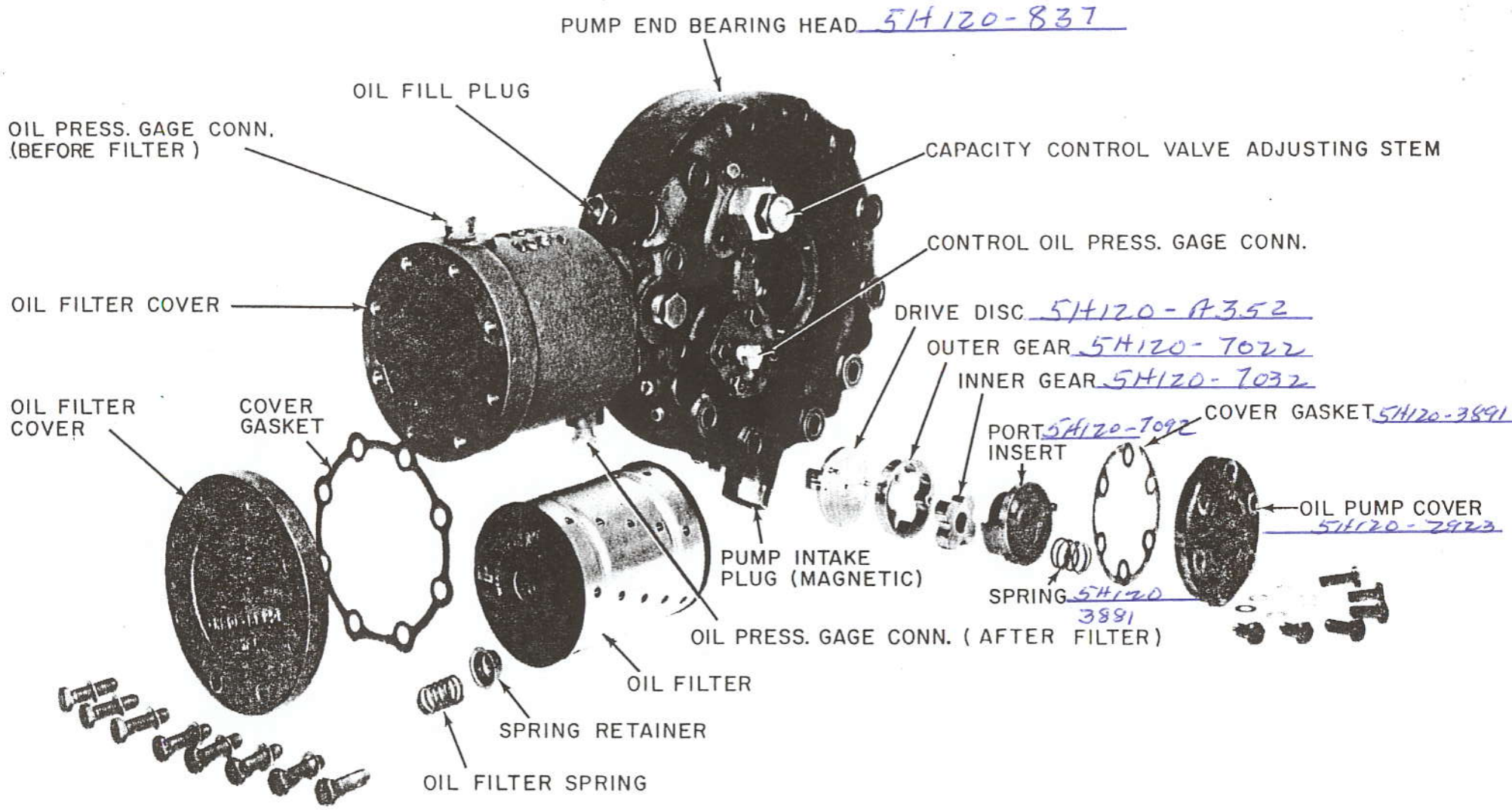
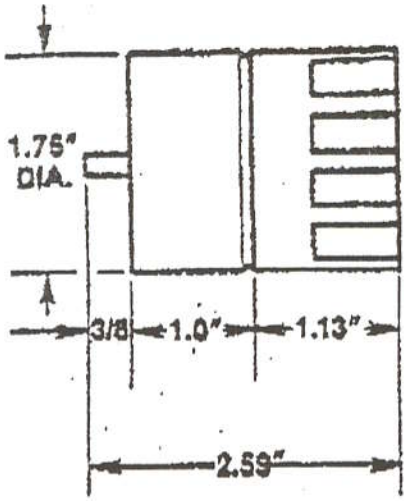
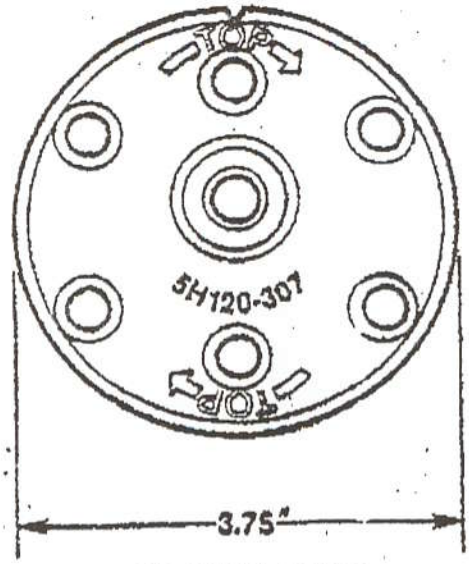


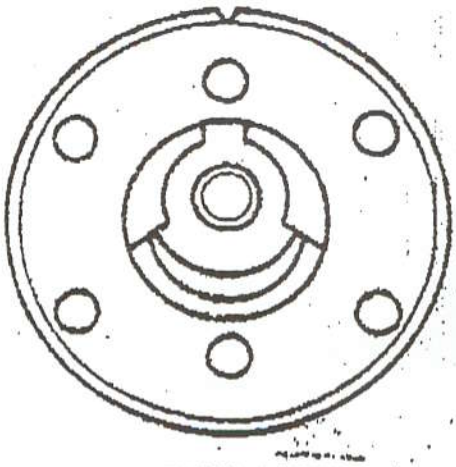
Fig. 35 — Oil Pump and Filter Assembly (5H120,126)



5H120-A372 OIL PUMP
(SIDE VIEW)



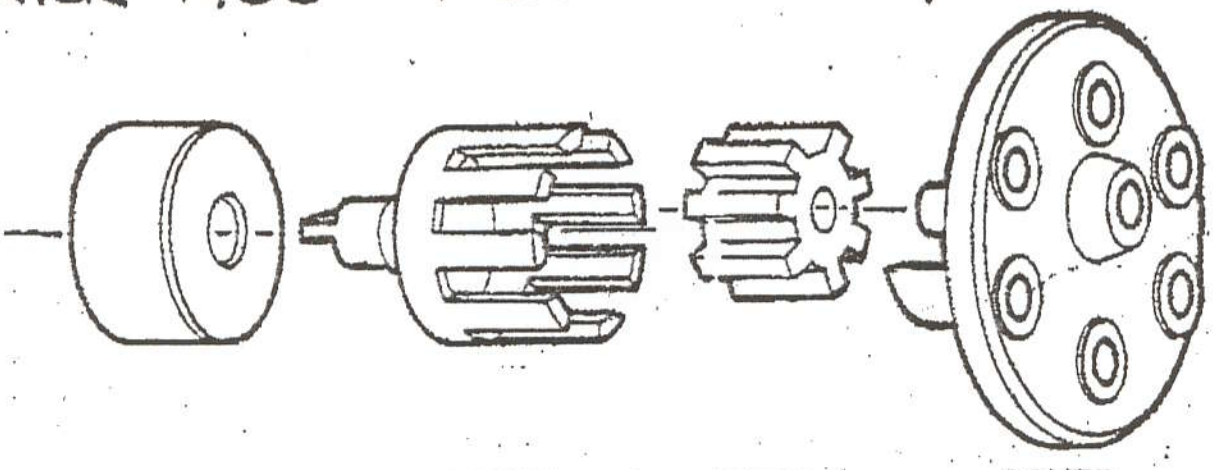
OIL PUMP COVER
(FRONT VIEW)



OIL PUMP COVER
(REAR VIEW)

5H120-343 PUMP COVER GASKET
-1653 P.T. BRG HSG GASKET

PRIOR 1960 PRIOR C 447119

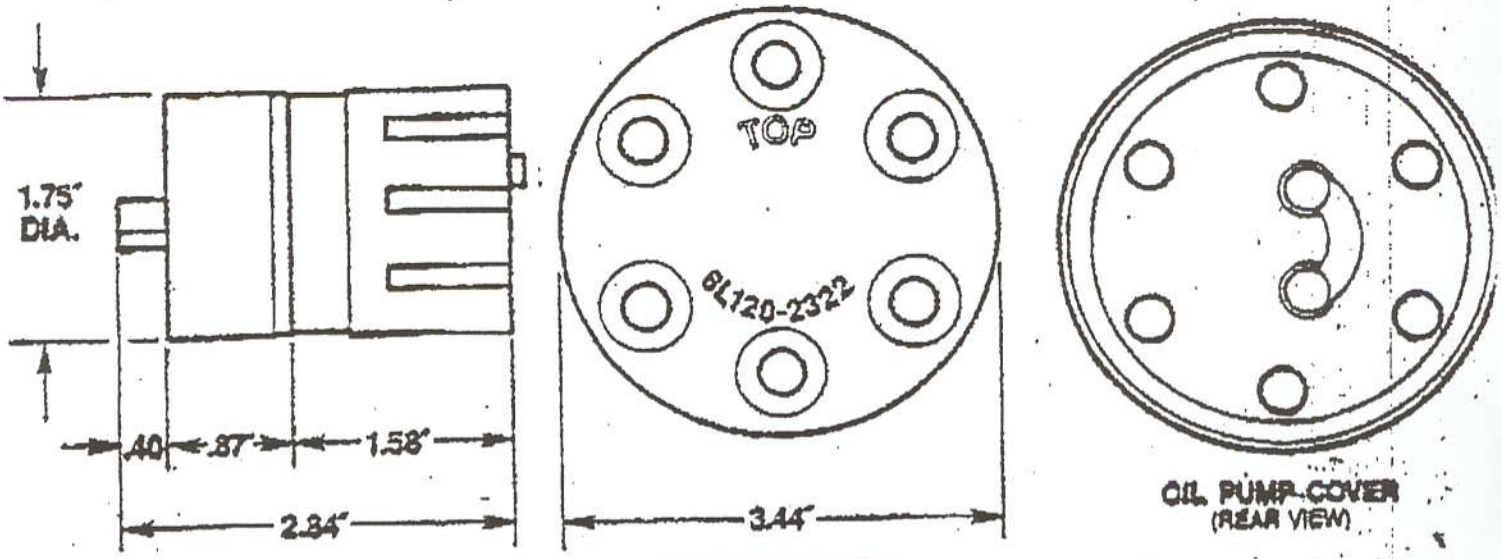


BUSHING ROTOR IDLER COVER

5H120-150 PUMP ASSY

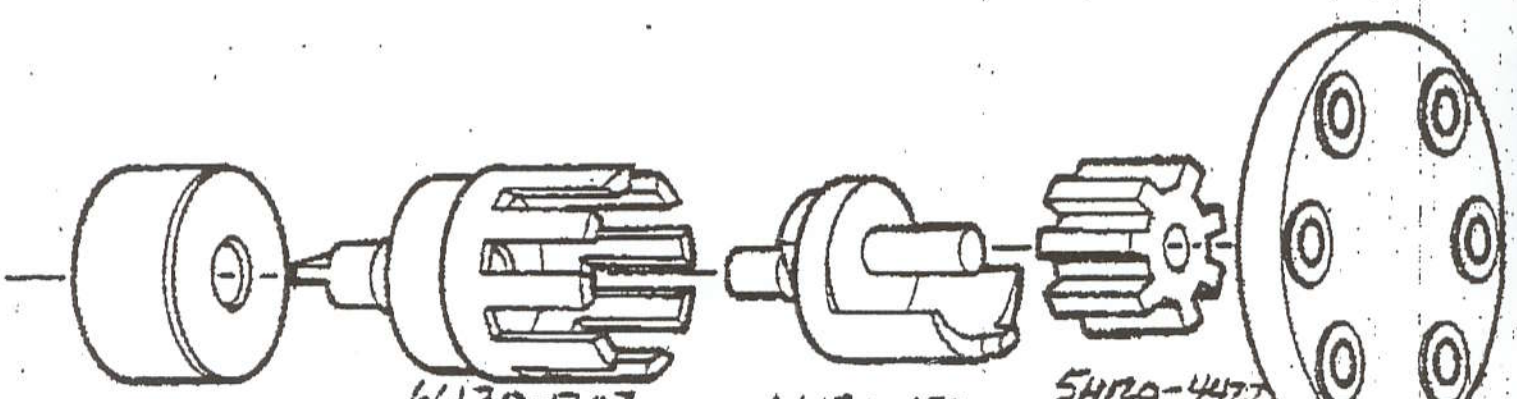
5H120-A372 OIL PUMP

FIG. 1



OIL PUMP COVER
(FRONT VIEW)

6L120-252 OIL PUMP
(SIDE VIEW)

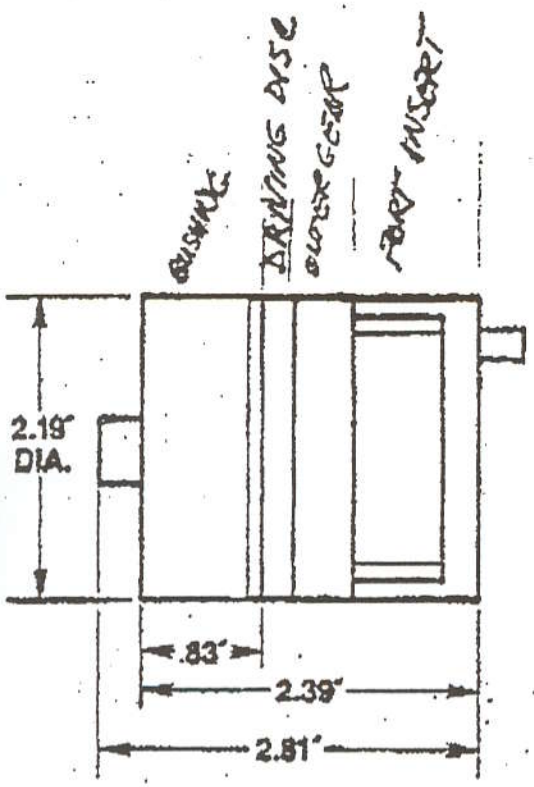


6L120-150 PUMP PKG
KK7IGY 033 "O" RING

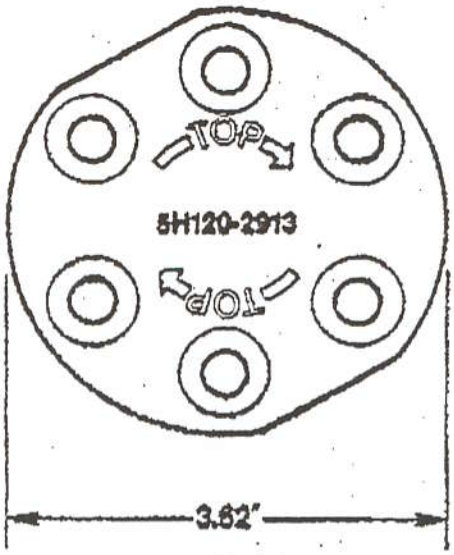
6L120-252 OIL PUMP

6L120-1051
OR
SH40-1911
PIN IDLER

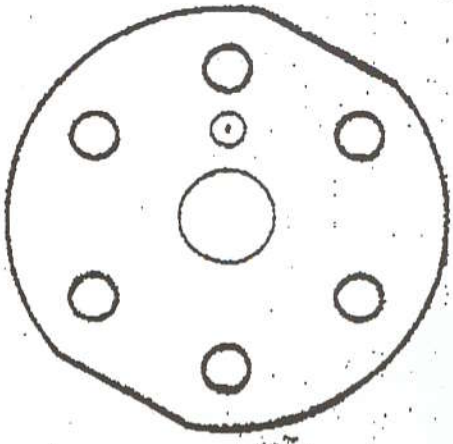
FIG. 2



5H120-A773 OIL PUMP
(SIDE VIEW)

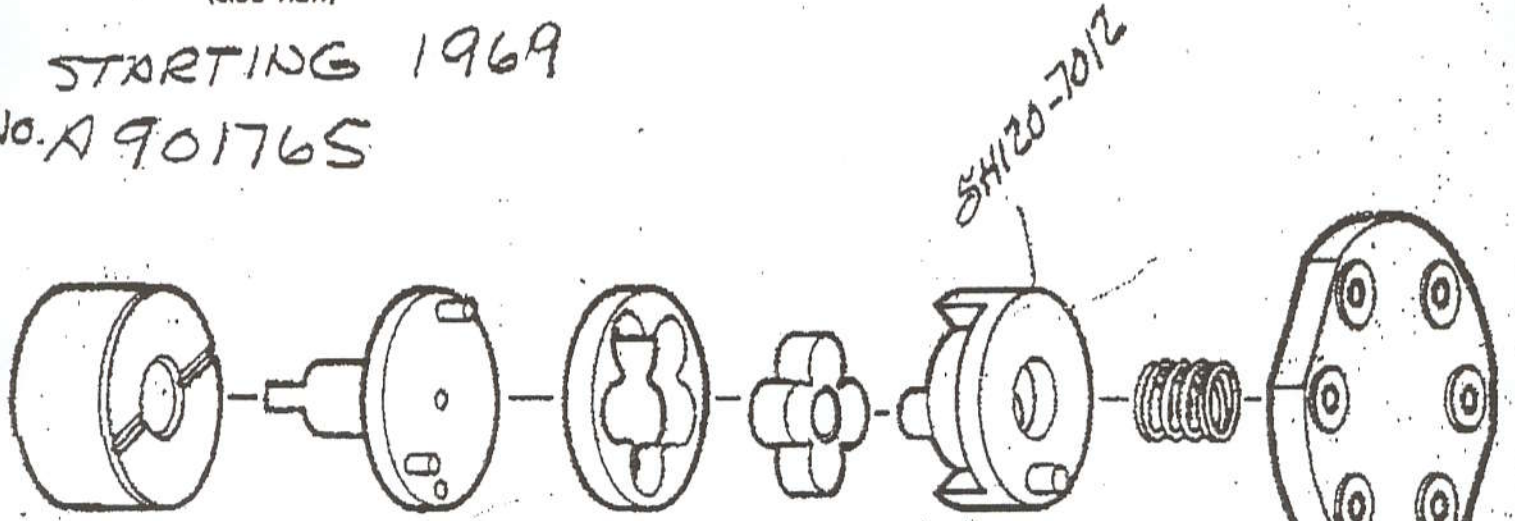


OIL PUMP COVER
(FRONT VIEW)



OIL PUMP COVER
(REAR VIEW)

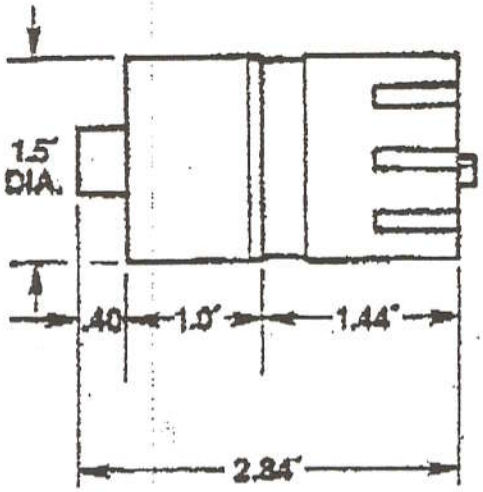
STARTING 1969
No. A901765



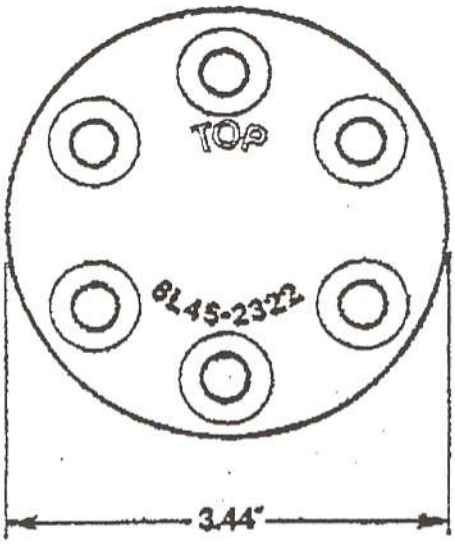
ROLL PIN AX14CA168 GASKET 5H120-3891

5H120-A773 OIL PUMP

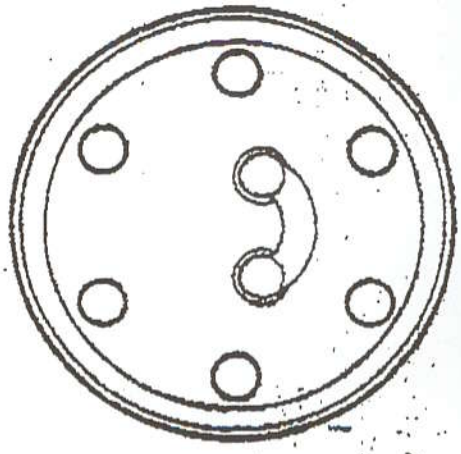
FIG. 3



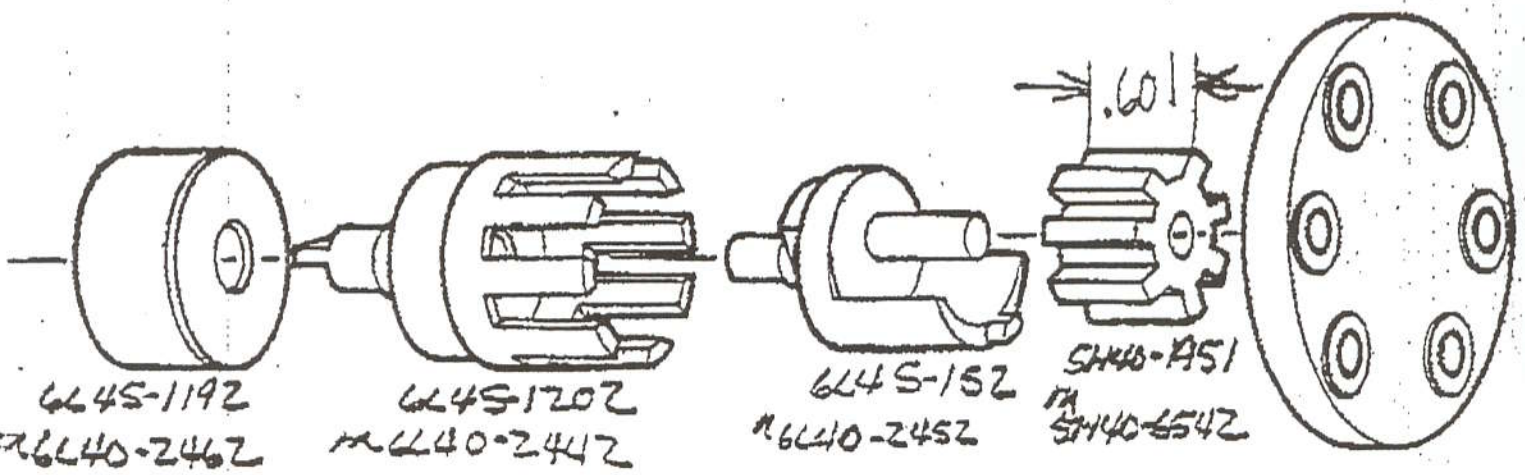
6L45-252 OIL PUMP
(SIDE VIEW)



OIL PUMP COVER
(FRONT VIEW)



OIL PUMP COVER
(REAR VIEW)
6L45-1222



BUSHING ROTOR IDLER CARRIER IDLER COVER

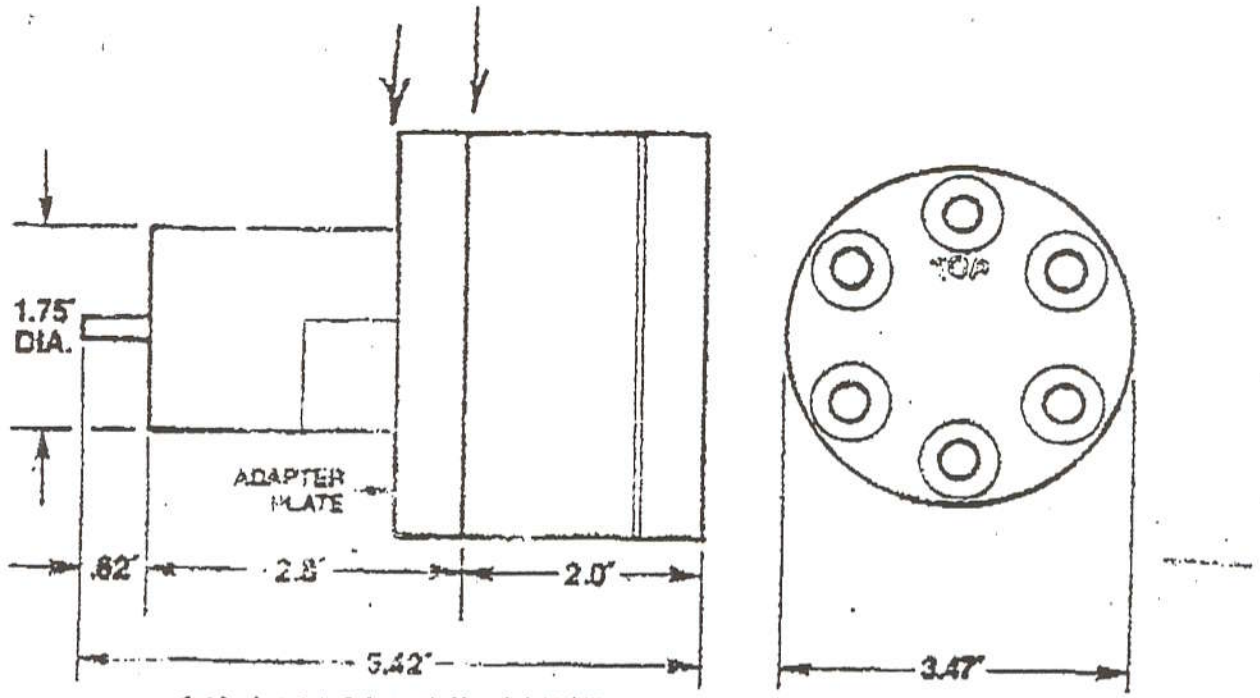
6L45-150 OIL PUMP
KK1GY033 "O" RING

6L45-252 OIL PUMP

FIG. 4

6L45-AA

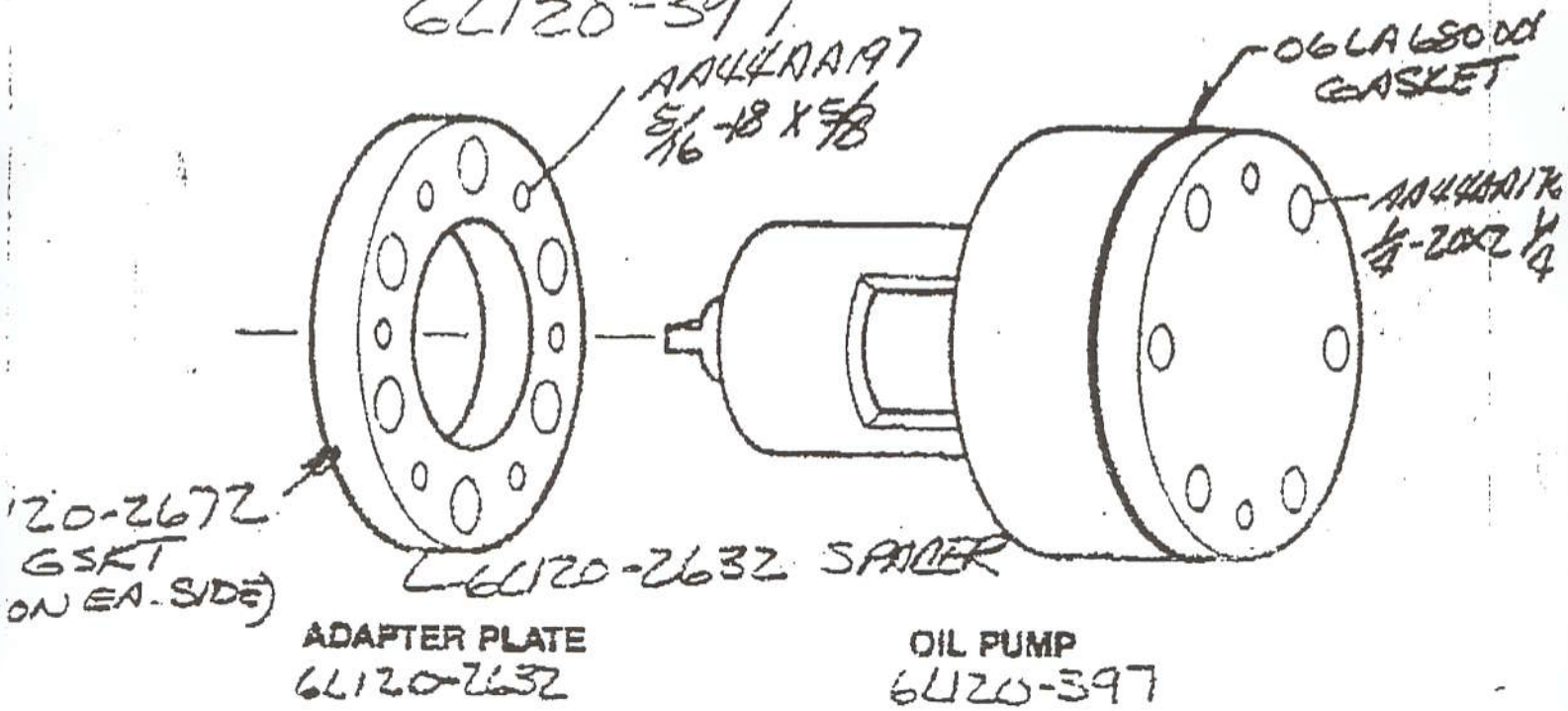
2 6L120-2672 GASKET



06LA660008 OIL PUMP
(SIDE VIEW)

OIL PUMP COVER
(FRONT VIEW)

6L120-397



ADAPTER PLATE
6L120-2632

OIL PUMP
6L120-397

06LA660008 OIL PUMP

FIG. 5

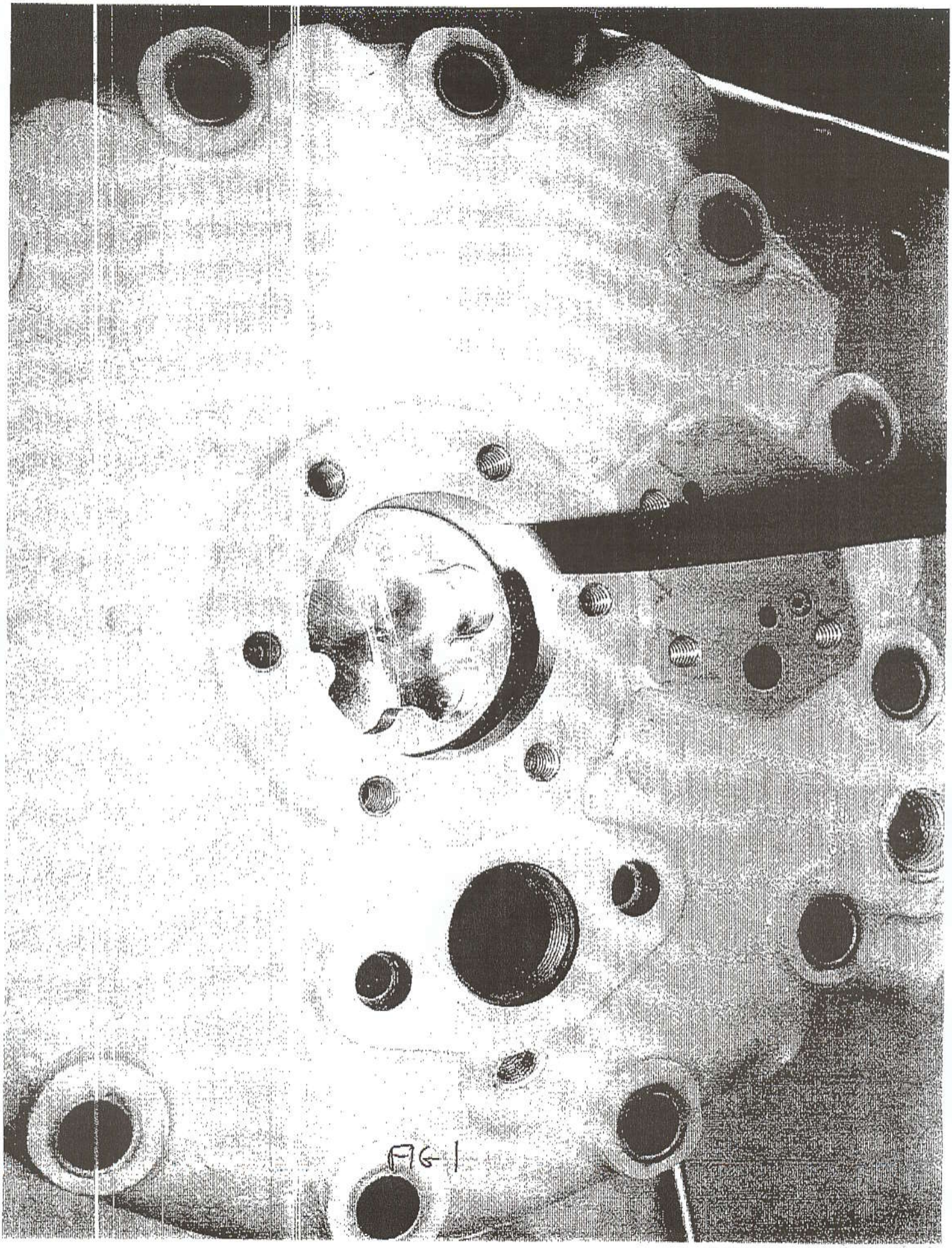


FIG 1

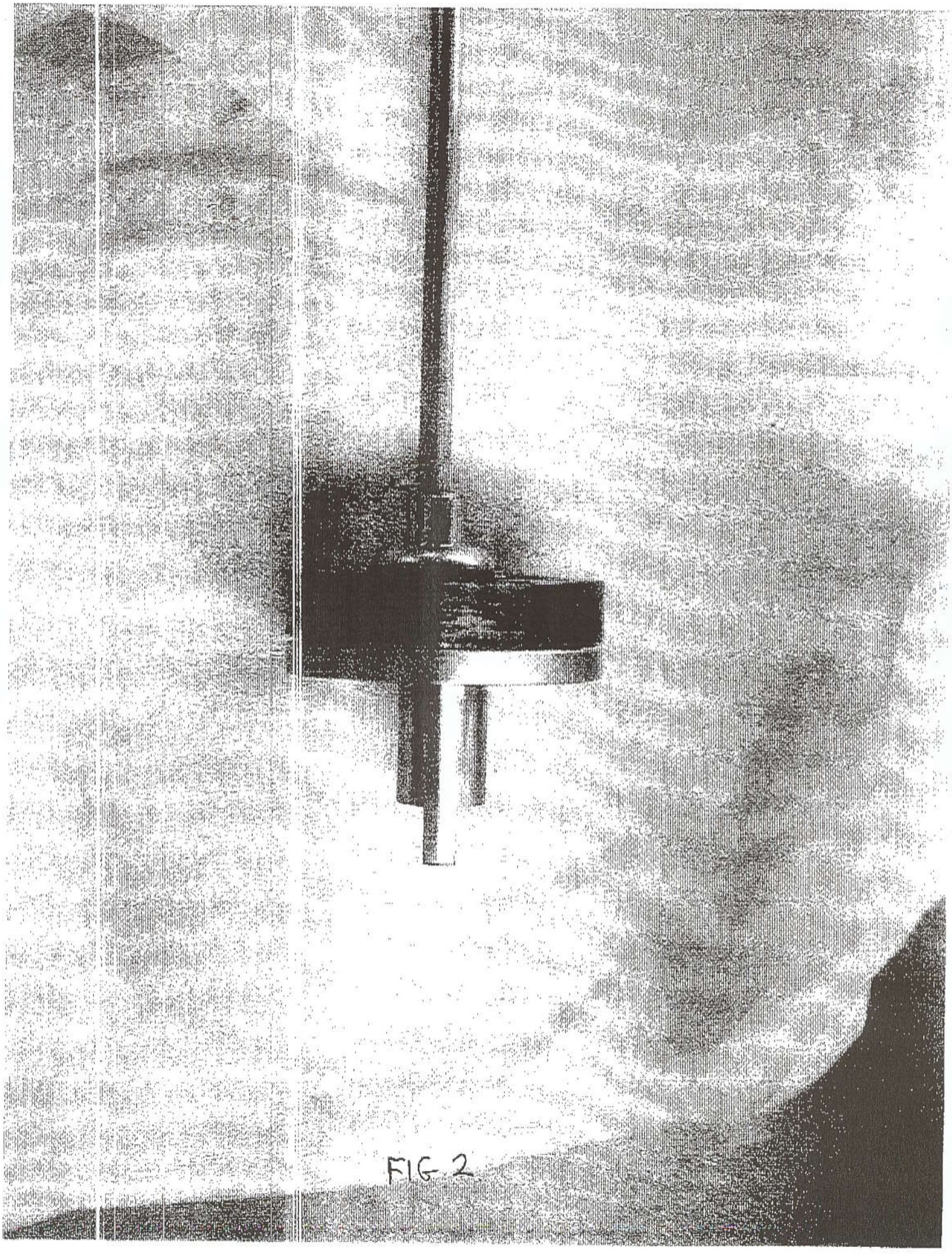
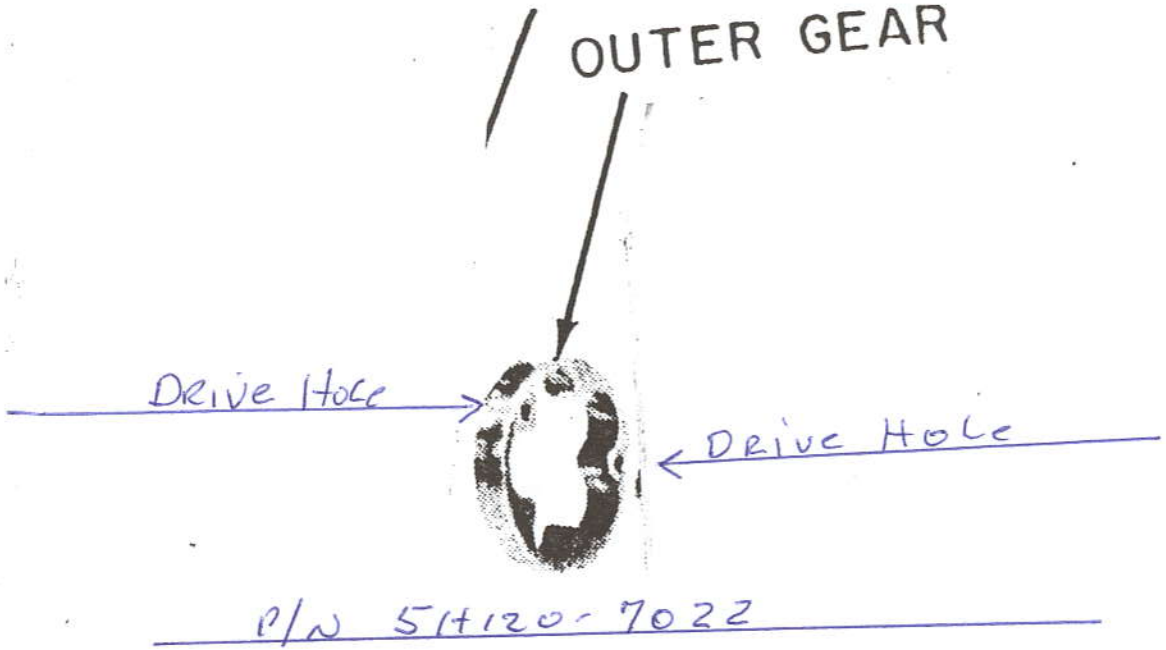


FIG 2



P/N 5H120-7022

View 3