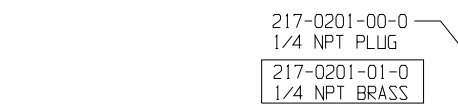
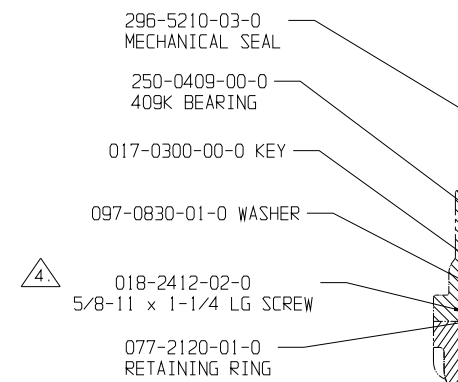


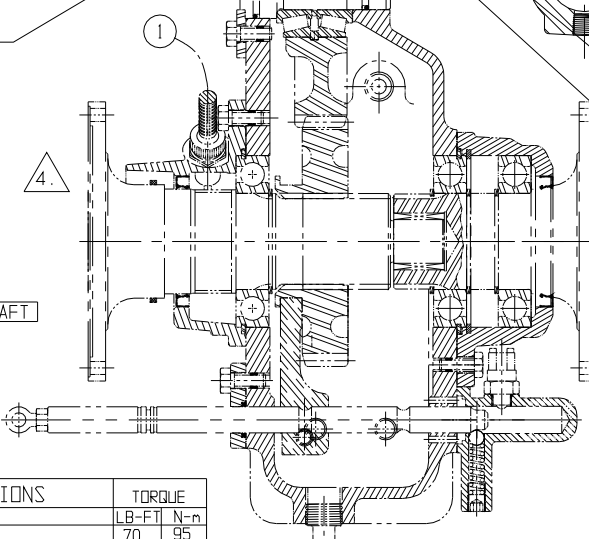
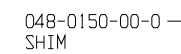
GEAR BOX INDICATOR LIGHTS FOR WIRING SCHEMATIC SEE PLATE NO. 746



BEARING HOUSING P/N	PUMP MODEL
062-0770-00-0	DSD-23 & DSD-15
062-0770-01-0	DSD-21 & DSD-17
062-0770-02-0	DSD-19
062-0770-20-0	DSD-23 & DSD-15
062-0770-21-0	DSD-21 & DSD-17
062-0770-22-0	DSD-19

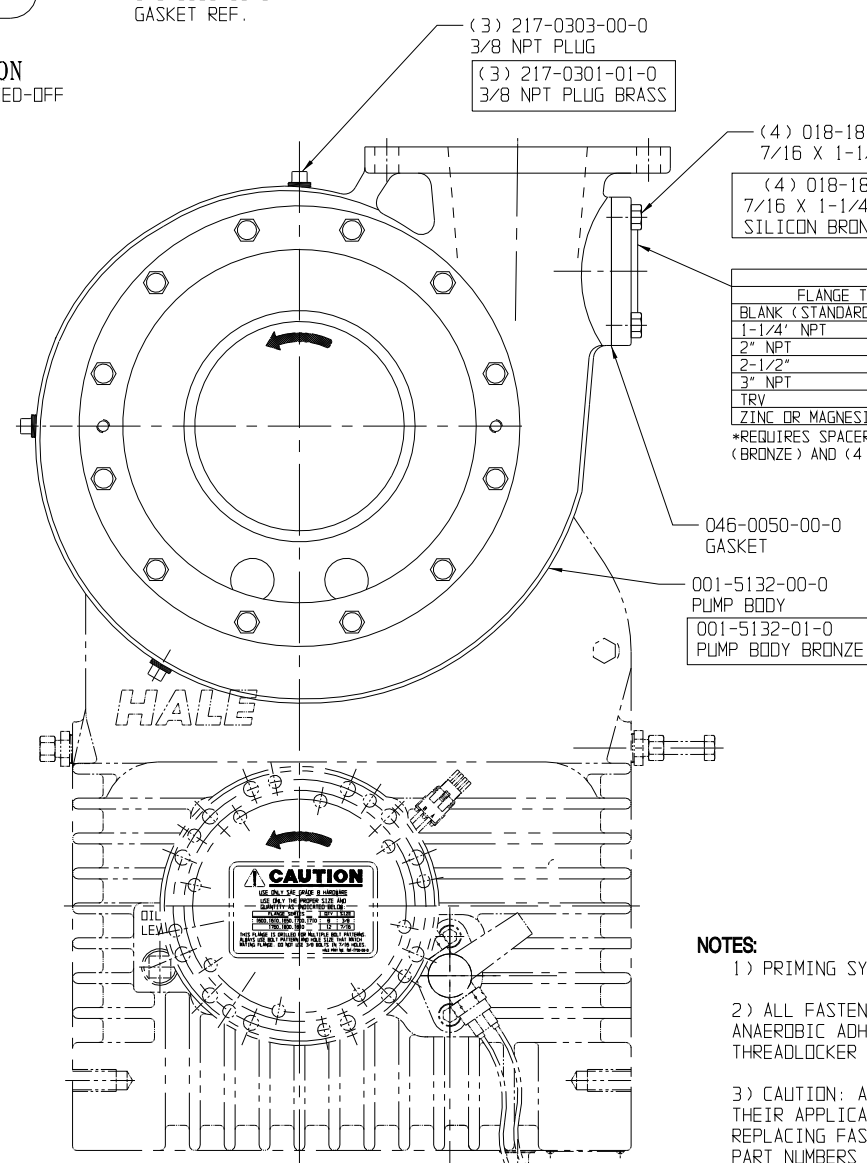
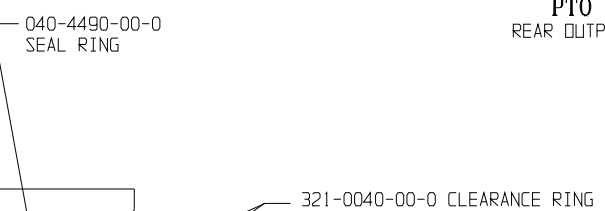
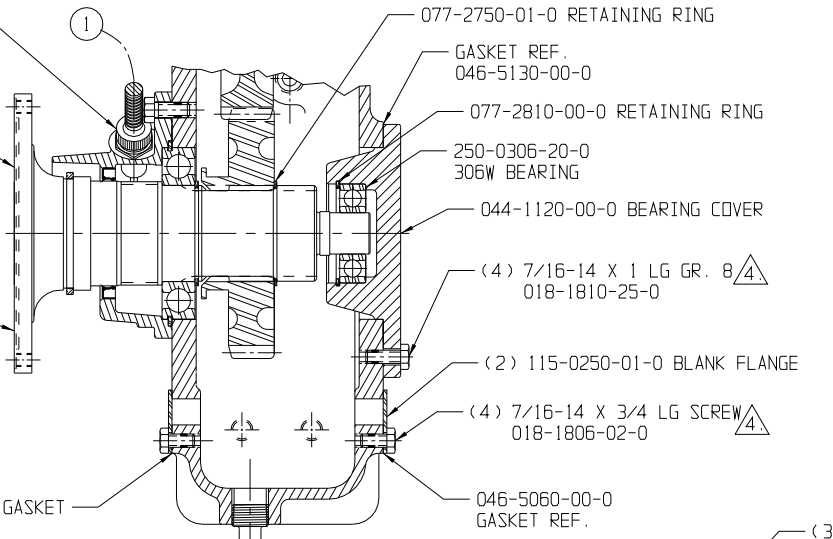
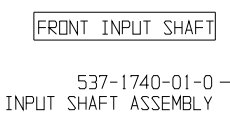


NO. OF TEETH	GEAR PART NO.	PUMP MODEL
18	031-0920-00-0	DSD-23
20	031-0930-00-0	DSD-21
22	031-0940-00-0	DSD-19
24	031-0950-00-0	DSD-17
26	031-0960-00-0	DSD-15



NOTE: APPARATUS MANUFACTURER TO FURNISH SPEED COUNTER ADAPTER TO CORRECT FOR P.T.O. RATIO. 1"-20 THREADED CONNECTION.

NOTE: TO CONFORM TO NFPA 1901 & 1902, THE APPARATUS MANUFACTURER MUST INSTALL INDICATOR LIGHTS FOR PUMP AND ROLL OPERATION PER HALE PLATE NO. 746.



"K" PORT FLANGE OPTIONS

FLANGE TYPE	IRON P/N	BRONZE P/N
BLANK (STANDARD)	115-0050-00-0	115-0050-01-0
1-1/4" NPT	115-1260-00-0	115-1260-01-0
2" NPT	115-0060-00-0	115-0060-02-0
2-1/2" NPT	115-0070-00-0	115-0070-01-0
3" NPT	115-0080-00-0	115-0080-01-0
TRV	SEE PLATE 729	SEE PLATE 729
ZINC OR MAGNESIUM ANODE*	SEE PLATE 869	SEE PLATE 869

*REQUIRES SPACER 159-0010-01-0 (IRON) OR 159-0010-21-0 (BRONZE) AND (4) 018-1820-02-0 OR (4) 018-1820-05-0 (BRONZE)

- NOTES:**
- 1) PRIMING SYSTEM, DISCHARGE & SUCTION VALVES ARE AVAILABLE.
 - 2) ALL FASTENERS SHALL BE INSTALLED WITH A NUT LOCKING ANAEROBIC ADHESIVE/SEALANT: LOCTITE #246 HIGH TEMPERATURE THREADLOCKER OR EQUIVALENT.
 - 3) CAUTION: ALL FASTENERS ON THIS UNIT HAVE BEEN SELECTED PER THEIR APPLICATION. HALE PRODUCTS DOES NOT RECOMMEND REPLACING FASTENERS WITH ANYTHING OTHER THAN HALE PART NUMBERS PROVIDED. REPLACING WITH A WEAKER ALTERNATIVE POSES A SAFETY RISK.
 - 4) FOR ALL TORQUE SPECIFICATIONS REFERENCE TABLE-"A"
 - 5) ITEMS SHOWN IN [] ARE FOR BRONZE VERSION ONLY

SEE PLATE 766 FOR 'RG' GEARBOX PARTS NOT IDENTIFIED

TABLE-"A" TORQUE SPECIFICATIONS

SIZE	TORQUE LB-FT	TORQUE N-m
7/16-14 GRADE 8	70	95
7/16-14 CARBON STEEL SAE GRADE 5	50	68
7/16-14 SILICON BRONZE	29	39
5/8-11 CARBON STEEL SAE GRADE 5	150	203
5/8-11 SILICON BRONZE	85	115

HALE TYPE DSD SERIES PUMP WITH "RG" GEARBOX

PLATE NO. 790AD

0459	D	UPDATED TO CURRENT PRODUCTION	MJP	10-04-06	MAL
0213	C	UPDATED NOTES AND PART NUMBERS TO REFLECT CURRENT PRODUCTION	DH	11-15-05	MAL
01-041	B	ADDED PART DESCRIPTIONS: 002-5180-00-0 & 321-0040-00-0, REVISED 018-1060-00-0	JBS	01-23-01	MAL
99-211	A	RELEASE TO PRODUCTION	DL	8-6-99	RET
ECD NO	REV	CHANGED FROM	BY	DATE	APVD



HALE PRODUCTS, INC.
A Unit of IDEX Corporation
Conshohocken, PA 19428 USA

GEARBOX MODEL	GEAR RATIO
DSD*-23R	2.28
DSD*-21R	2.05
DSD*-19R	1.86
DSD*-17R	1.71
DSD*-15R	1.58

THE HALE TYPE DSD XXX-XXR PUMP IS AVAILABLE IN 750, 1000 & 1250 GPM NFPA RATINGS. THE COMPLETE PUMP MODEL NUMBER IS FORMED AS FOLLOWS:
PUMP RATED PUMP RGA MODEL CAPACITY RATIO GEARBOX
FOR EXAMPLE, A DSD PUMP IS REQUIRED TO HAVE A 1250 GPM RATING WITH A 2.28 GEAR RATIO. THE PUMP MODEL NUMBER WOULD BE AS SHOWN: DSD 125 23 R

WARNING
EXCEEDING THESE LIMITS OR FAILURE TO FOLLOW THE RECOMMENDATIONS OUTLINED ON THIS DRAWING COULD DAMAGE THE PUMP AND RESULT IN PERSONAL INJURY.
MAXIMUM GEARBOX SHAFT TORQUE (ROAD) = 16,000 LBS-FT (21,693 N-m)

PUMP MODEL	MAX GEARBOX INPUT RPM
DSD*-23R	2630
DSD*-21R	2920
DSD*-19R	3220
DSD*-17R	3500
DSD*-15R	3800

SEE HALE TORQUE LIMIT CHART F-72 FOR ADDITIONAL DATA.
MAXIMUM ALLOWABLE HYDRODYNAMIC PRESSURE: 400 PSIG
MAXIMUM ALLOWABLE HYDROSTATIC PRESSURE: 600 PSIG

THIS PRODUCT AND ITS COMPONENTS MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS AND OTHER PATENTS PENDING:
4,337,830
4,587,862
4,653,978
5,018,665
5,139,393