

CAFSPro / SmartCAFS CLUTCH ASSEMBLY & ORIENTATION

ITEM 1		
PUMP	SHAFT PART #	IMPELLER ASS'Y
QMAX	037-1990-01-0	PL886
QTWO	037-2410-00-0	PL888
QFLO	037-2450-01-0	PL884
DSD	037-2450-01-0	FGS-PL-01365

ITEM 10		
PUMP	PART NUMBER	TEETH
QMAX/QTWO	031-1821-01-0	71
QFLO/DSD	031-1811-01-0	56

CLUTCH INSTALLATION PROCEDURE:

- CLUTCH MUST BE LEAK TESTED BY APPLYING 100 PSI TO THE "100 PSI MAX" PORT FOR 10 MINUTES. SWAB THE "LUBE PORT" WITH SOAPY WATER TO DETECT LEAKS PRIOR TO MOUNTING CLUTCH ON SHAFT. IF NO LEAKS ARE PRESENT, PROCEED WITH THE REMAINING STEPS.
- ASSEMBLE ITEMS 4, 5, 6 & 7 AS SHOWN. APPLY BLUE LOCTITE #243 TO PIPE NIPPLE WHEN INSTALLING ITEM 5. POSITION ITEM 4 UP AGAINST ITEM 5 & ITEM 7 UP AGAINST 4.
- APPLY GREASE TO THE ITEM 3, O-RING, AND SLIDE O-RING UP TO ITEM 7.
- INSTALL CLUTCH KEY (ITEM 26) AND SLIDE CLUTCH (ITEM 25) ONTO SHAFT.
- APPLY BLUE LOCTITE #243 TO INSERTION END OF NIPPLE. SEE NOTE 4.
- INSERT NIPPLE INTO "100 PSI MAX" PORT ON CLUTCH.
- BY HAND, SLIDE O-RING DOWN NIPPLE TO COUNTERBORED HOLE IN CLUTCH HOUSING.
- INSERT THE BLADE OF A FLAT BLADED SCREW DRIVER BETWEEN ITEMS 4 & 7 AND USING THE SCREW DRIVER BLADE FOR LEVERAGE, INSERT THE O-RING INTO COUNTERBORED HOLE, BEING CAREFUL NOT TO DAMAGE THE O-RING.
- SECURE THE O-RING BY SLIDING THE SHAFT COLLAR DOWN ON THE NIPPLE AND LOCK IN PLACE WITH THE SET SCREW.
- INSTALL ITEMS 8 AND 24 AND TORQUE BOLT TO 70 FT-LBS.
- USE CLUTCH SHAFT (ITEM 12) TO ALIGN THE CLUTCH PLATES BY CAREFULLY ROTATING CLOCKWISE AND COUNTER-CLOCKWISE, PICKING UP EACH OF THE CLUTCH PLATES. USE EXTREME CAUTION NOT TO BEND OR DAMAGE ANY OF THE CLUTCH PLATES.
- INSTALL CLUTCH ALIGNMENT TOOL (NOT SHOWN) TO KEEP THE CLUTCH SHAFT AND CLUTCH PLATES CONCENTRIC.
- APPLY 100 PSI AIR TO ITEM 5 TO LOCK THE CLUTCH TEETH IN PLACE.
- REMOVE ALIGNMENT TOOL ASSEMBLY AND FINISH INSTALLING DRIVEN SHAFT ASSEMBLY, BEING CAREFUL NOT TO BEND ANY OF THE CLUTCH PLATES DURING RE-INSTALLATION.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	SEE TABLE	SHAFT	1
2	048-1630-00-0	CAFSPRO SHIM	1
3	040-1100-00-0	O-RING SIZE 110	1
4	242-1130-00-0	SHAFT COLLAR CLAMP	1
5	082-0131-02-0	ELBOW 1/8"FNPT X 1/4" COMPRSN 90	1
6	082-0155-02-0	1/8" BRASS NIPPLE, 1 1/2" LG	1
7	159-5520-00-0	SPACER, .422 ID X .531 OD X .625 LG	1
8	018-1810-02-0	SCREW, 7/16-14 X 1, GR8	1
9	018-1412-02-0	5/16-18 X 1.25 HEX HEAD CAP SCREWS	2
10	SEE TABLE	SPROCKET	1
11	250-8260-00-0	BEARING, TAPERED ROLLER, PRE-SET	1
12	037-2660-00-0	CLUTCH DRIVEN SHAFT	1
13	018-2414-25-0	SCREW, HHCS, 5/8-11X1-1/2 LG,GR8	1
14	097-0830-01-0	WASHER-IMP SHAFT	1
15	017-0300-00-0	SSA-95XD KEY	1
16	048-0170-00-0	344-09 (C-344) SHIM	1
17	296-2540-00-0	QHD OIL SEAL	1
18	062-0980-00-0	HOUSING, CAFS CLUTCH REAR HOUSING	1
19	097-0560-01-0	WASHER, SPLIT, 5/16, ZP STEEL	4
20	097-0810-01-0	WASHER, 5/16 FLAT STL ZINC PL	4
21	018-1414-02-0	5/16-18 X 1.50 HEX	4
22	019-3580-01-0	LOWER BELT GUARD SUPPORT	1
23	040-2570-00-0	O-RING	1
24	097-2430-00-0	WASHER, CLUTCH HOUSING	1
25	505-0260-01-0	LOGAN CLUTCH S45-0043	1
26	017-00013	KEY, 2-1/2" X 1/4"	1




NOTES:

- SEE FSG-PL-01383 FOR FRONT CLUTCH HOUSING ASS'Y.
- SEE FSG-PL-01379 FOR COOLING HOSES.
- APPLY GREEN LOCTITE #680 (OR EQUIVALENT) TO OUTSIDE DIAMETER OF SEAL BEFORE INSTALLING.
- ITEM 2 IS NORMALLY NEEDED TO ALIGN CLUTCH ACTUATION PORT WITH HOLE IN CLUTCH HOUSING. FOLLOW CLUTCH INSTALLATION PROCEDURE DESCRIBED ABOVE.
- .010 SHIMS MAY BE USED IF NEEDED DURING FINAL ALIGNMENT OF UPPER & LOWER SPROCKETS, IF MISALIGNMENT IS LESS THAN .030. IF MISALIGNMENT IS GREATER THAN .030, RE-ADJUST HUB ON COMPRESSOR SHAFT.
- ALL FASTENERS SHOULD BE INSTALLED USING BLUE LOCTITE #243.
- THE TAPERED ROLLER BEARINGS, ITEM 11, ARE PURCHASED AS A MATCHED SET THAT INCLUDES AN INNER AND OUTER SPACER RING.

REVISIONS					
ECN	REV	ZONE	CHANGED FROM	BY	DATE
CFL3216	J	ALL	REMODELED AND REDRAWN IN SOLIDWORKS ON FSG BORDER; ADDED DSD INFORMATION: 037-2450-00-0 TO 037-2450-01-0; 031-1810-01-0 AND 031-1820-01-0 TO 031-1811-01-0 AND 031-1821-01-0; MOVED CLUTCH HOUSING ASSEMBLY TO FSG-PL-01383; UPDATED NOTES & ADDED CLUTCH INSTALLATION PROCEDURE.	WMB	07MAR2014
CFL3719 B12	K	L12; H5	CHANGED KEY FROM 017-0200-00-0 TO 017-00013	JDF	17JUNE2016
5861	L		RE-ORDERED NOTES, ADDED PLUGS AND FITTINGS TO BOM SHEET 2, ADDED SHEET 3 TO SHOW SOLENOIDS MOUNTED TO BRACKET	MAC	04AUG2022

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS [INCHES ARE FOR REFERENCE, ONLY] TOLERANCE FOR MILLIMETER DIMENSIONS:
X: ±1
X.X: ±0.5
X.XX: ±0.25
X.XXX: ±0.125
ANGLES: ±0.25°
SURFACE TEXTURE IN µm Ra REMOVE ALL SHARP EDGES, 0.25MAX

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FSG OF IDEX IDEX CORPORATION		  			
MATERIAL		TITLE			
MADE FROM		CAFSPPro/SmartCAFS CLUTCH ASS'Y			
FINISH	DRAWN	TRB	SIZE	DRAWING NUMBER PL1085	REV
PROJECT	APPROVED	MAL	D		L
	DATE	01AUG2005	SCALE 1:10		SHEET 1 OF 3

CAFSPro / SmartCAFS CLUTCH ASSEMBLY & ORIENTATION

PROJECTION: 

ITEMS 27 & 28 ARE INSTALLED ON COMPRESSOR ASS'Y.

ADD 12 OZ OF DEXRON III OR MERCON ATF THRU BREATHER TUBE BEFORE TEST. SIGHT TUBE SHOULD SHOW FLUID LEVEL TO CENTER OF TUBE.

REMOVE PLUG WHEN ADDING ATF FLUID TO FULLY DRAIN BREATHER TUBE

REFER TO SHEET 3 FOR INSTALLATION OF SOLENOID ASSEMBLIES

PLUG MUST BE AT THE BOTTOM OF THE HOUSING WHEN INSTALLED ON CLUTCH ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
27	019-3450-00-0	SUPPORT, UPPER BELT GUARD	1
28	101-2200-00-0	OIL DECAL	1
29	082-0458-02-0	CPLNG, 1/4 FNPT X 1/8 FNPT, BRASS	1
30	044-0260-00-0	VENT, AIR 1/8 MPT	1
31	082-0432-02-0	ADAPTER 1/4 MPT x 1/2 HSE BRB	1
32	097-0020-01-0	WASHER, FLAT 1/4"	1
33	018-1205-02-0	SCREW-1/4-20X5/8L ZINC	1
34	242-1110-00-0	CLAMP, 3/4" ID	1
35	340-1250-00-1	HOSE, 1/2" ID X 3/4" OD X 17" LG	1
36	340-00024-000	HOSE, 3/8" ID, CLUTCH RETURN SHORT	1
37	340-00022-000	HOSE, 3/8" ID, CLUTCH SUPPLY SHORT	1
38	082-90302-802	UNION, 3/8 X 1/4 CPRSN, STRAIGHT	1
39	082-90301-002	ELBOW, 3/8 X 1/4 CPRSN 90, BRASS	1
40	082-3059-02-0	FITTING, ELBOW, SWIVEL, 1/8 BSPTx6 MM COMP	2
41	604-0690-00-0	TUBING TYPE PFA 6MM OD x 4MM ID	1
42	082-0328-02-0	FITTING ELBOW 45° NIPPLE	1
43	217-0401-01-0	PLUG-1/2 NPT BRASS	1
44	217-0201-01-0	PLUG-1/4 NPT BRASS	2
45	217-0101-01-0	PLUG - 1/8 NPT BRASS SQ	1

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REMOVE ALL SHARP EDGES, 0.25MAX

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IDEX CORPORATION

MATERIAL

MADE FROM

FINISH

PROJECT



TITLE

CAFSPro/SmartCAFS CLUTCH ASS'Y

DRAWN

TRB

DATE

01AUG2005

SIZE

D

SCALE

1:10

DRAWING NUMBER

PL1085

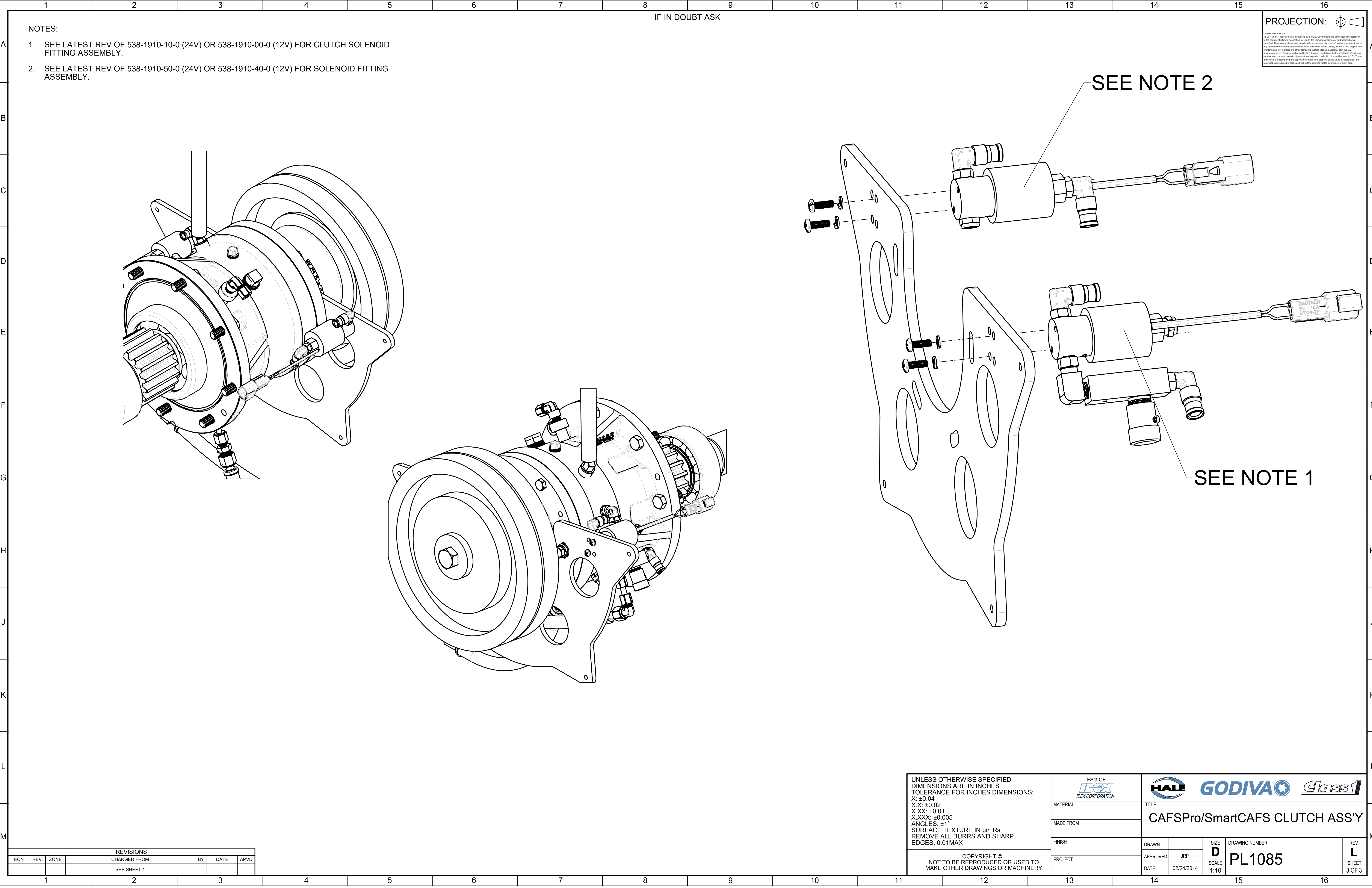
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SHEET

2 OF 3

REVISIONS						
ECN	REV.	ZONE	CHANGED FROM	BY	DATE	APVD
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NOTES:

1. SEE LATEST REV OF 538-1910-10-0 (24V) OR 538-1910-00-0 (12V) FOR CLUTCH SOLENOID FITTING ASSEMBLY.
2. SEE LATEST REV OF 538-1910-50-0 (24V) OR 538-1910-40-0 (12V) FOR SOLENOID FITTING ASSEMBLY.

IF IN DOUBT ASK

PROJECTION:

COMPLIANCE NOTICE:
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REVISIONS						
ECN	REV.	ZONE	CHANGED FROM	BY	DATE	APVD
-	-	-	SEE SHEET 1	-	-	-

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCE FOR INCHES DIMENSIONS:
X: ±0.04
X.X: ±0.02
X.XX: ±0.01
X.XXX: ±0.005
ANGLES: ±1°
SURFACE TEXTURE IN µin Ra
REMOVE ALL BURRS AND SHARP
EDGES, 0.01MAX

FSG OF
IDEX
IDEX CORPORATION

MATERIAL

MADE FROM

FINISH

PROJECT

TITLE

CAFSPro/SmartCAFS CLUTCH ASS'Y

DRAWN

APPROVED

DATE

JRP

02/24/2014

SIZE
D
SCALE
1:10

DRAWING NUMBER
PL1085

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3 OF 3