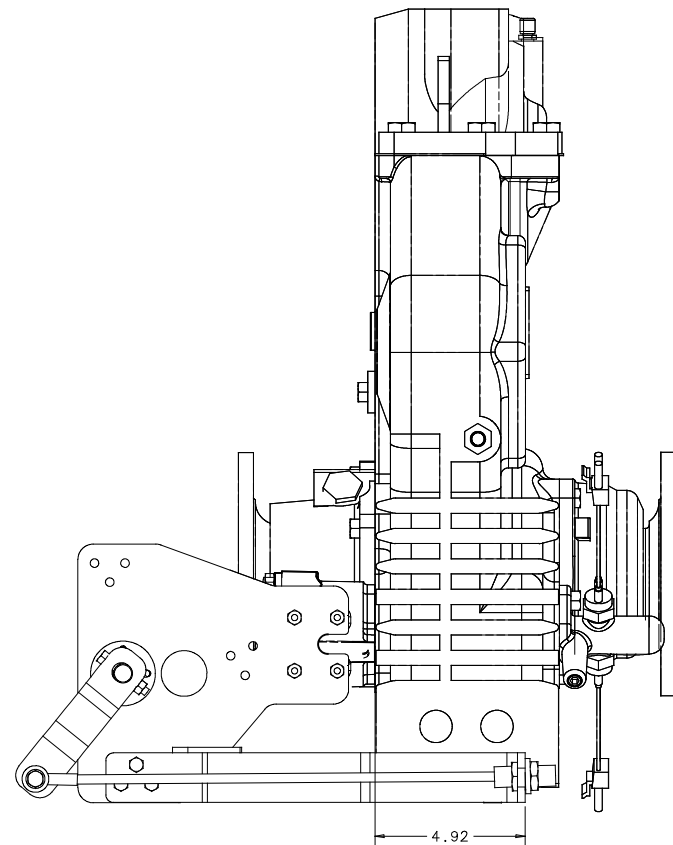
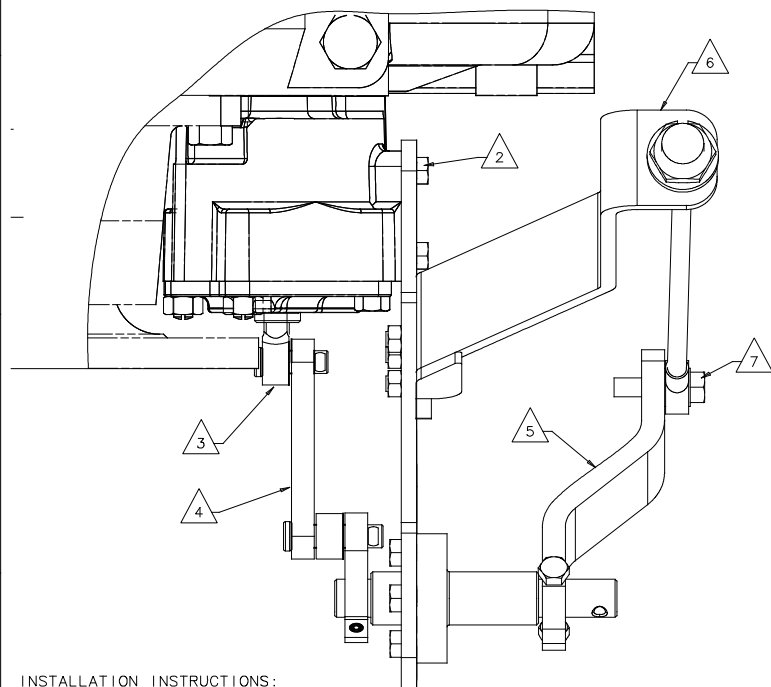


FRONT PULL  
LEVER ARM IS IN ROAD POSITION



REAR PULL  
LEVER ARM IS IN ROAD POSITION



INSTALLATION INSTRUCTIONS:

1. THE MANUAL SHIFT HAS BEEN ASSEMBLED EXCEPT FOR THE PARTS THAT NEED TO BE ADJUSTED.
2. INSTALL THE BRACKET TO THE VPS HOUSING USING THE (4) 1/4-20 X 5/8 LG HEX HEAD SCREWS SUPPLIED. APPLY LOCTITE 243 OR EQUAL TO THREADS.
3. WITH THE SHIFT SHAFT IN THE ROAD POSITION, REMOVE THE 3/8-24 NUT FROM THE EYEBOLT AND INSTALL THE EYEBOLT ON THE END OF THE SHAFT.
4. ATTACH THE LINK TO THE ROD END USING THE CLEVIS PIN AND COTTER PIN SUPPLIED.
5. ROTATE THE LEVER ARM TO THE CORRECT ORIENTATION (SEE PULL POSITION VIEWS ABOVE) AND SECURE USING THE 1/4-20 X 1.75 LG SCREW AND NUT SUPPLIED. APPLY LOCTITE 243 OR EQUAL TO THREADS.
6. POSITION AND ATTACH THE CABLE SUPPORT BRACKET WITH THE CABLE ATTACHED TO THE BRACKET USING THE (3) 1/4-20 X 3/4 LG SCREWS AND NUTS SUPPLIED. APPLY LOCTITE 243 OR EQUAL TO THREADS.
7. ATTACH THE LEVER ARM TO THE ROD END OF THE CABLE USING THE 5/16 X 1.25 LG SCREW AND NUT SUPPLIED. APPLY LOCTITE 243 OR EQUAL TO THE THREADS.
8. AFTER THE ABOVE STEPS ARE COMPLETED, PLACE THE TRUCK TRANSMISSION IN NEUTRAL. PLACE THE PUMP SHIFT LEVER IN NEUTRAL. ATTACH THE T-HANDLE TO THE END OF THE CABLE AND PULL. THIS WILL ENGAGE THE PUMP. IF THE PUMP IS NOT ENGAGED, ADJUST THE CABLE BY LOOSENING THE NUTS THAT ATTACH THE CABLE TO THE SUPPORT BRACKET AND SLIDE THE CABLE IN THE DIRECTION NEEDED TO ENGAGE THE PUMP, THEN RE-TIGHTEN THE NUTS. PUSH THE T-HANDLE IN TO ENSURE YOU SHIFT BACK TO ROAD.
9. REMOVE T-HANDLE AND ATTACH THE MOUNTING PLATE AND PANEL SUPPORT BRACKET TO THE TRUCK PANEL USING THE (4) 1/4-20 X 1.25 LG FINISHED ROUND HEAD SCREWS SUPPLIED. APPLY LOCTITE 243 OR EQUAL TO THREADS.
10. RE-ATTACH THE T-HANDLE AND REPEAT THE STEPS IN NOTE 8. IF YOU NEED ADJUSTMENT AT THIS TIME, LOOSEN THE NUTS THAT ATTACH THE CABLE TO THE PANEL SUPPORT AND SLIDE THE CABLE IN THE DIRECTION NEEDED. TIGHTEN THE NUTS AND APPLY LOCTITE 243 OR EQUAL TO THE THREADS OF THE T-HANDLE.
11. INSTALL MANUAL PUMP OVERRIDE SHIFT DECAL.
12. SEE FSG-PL-01457 FOR INSTALLATION WITH INTERLOCK ASSEMBLY. THIS USES (4) 1/4-20 X 3/4 LG HEX HEAD SCREWS

(E) 013-2100-00-0 CONTROL CABLE 72" LG  
SUPPLIED WHEN 512-0500-01-0  
IS ORDERED.

013-2100-01-0 CONTROL CABLE 55" LG  
SUPPLIED WHEN 512-0500-01-0  
IS ORDERED.  
RECOMMENDED FOR FRONT AND  
REAR PULL CONFIGURATION

(E) 019-3220-00-0 CABLE SUPPORT  
(3) 018-1206-25-0 SCREW  
(3) 110-1200-02-0 NUT

028-0050-03-0 ROD END 3/8-24  
064-7070-00-0 CLEVIS PIN 1 LG  
012-1490-00-0 LINK  
064-7840-00-0 CLEVIS PIN 1-1/2 LG  
(F) 159-1790-01-0 SPACER  
(D) 012-1550-00-0 LINK ARM  
064-0720-16-0 SPRING PIN

111126 GREASE FITTING (H)  
062-0870-00-0 PIVOT PIN HOUSING  
(4) 018-1206-25-0 SCREW

(E) 012-1540-00-0 LEVER ARM  
018-1216-25-0 SCREW  
110-1200-02-0 NUT

064-6630-00-0 PIVOT PIN  
019-3230-00-0 BRACKET

ADJUSTMENT NUTS (8)

(E) 018-1205-25-0 SCREW  
OR  
(4) 018-1206-25-0 SCREW (12)

(E) 028-0380-00-0 ROD END  
018-1412-25-0 SCREW  
110-1400-02-0 NUT

019-3250-00-0 PANEL CABLE SUPPORT

101-1920-01-0 DECAL

005-1260-01-0 MOUNTING PLATE  
(3) 018-1212-44-0 SCREWS

012-0160-04-0 T-HANDLE  
110-1500-03-0 NUT

ADJUSTMENT NUTS (10)

(9) (11)

(8) (9) (10)

WARNING

1. DO NOT ADJUST THE CONTROL CABLE WITH THE ENGINE RUNNING. SERIOUS INJURY OR DEATH COULD RESULT.
2. A GRADUAL OR SUDDEN INCREASE IN THE NO-LOAD FRICTION (CABLE DISCONNECTED AT BOTH ENDS) OF A CONTROL CABLE IS AN INDICATION OF A PENDING OR PRESENT PERFORMANCE PROBLEM.
3. A GRADUAL OR SUDDEN DECREASE IN THE USABLE TRAVEL IS AN INDICATION OF A PENDING OR PRESENT PERFORMANCE PROBLEM. THE CONTROL CABLE SHOULD BE REPLACED, OTHERWISE SERIOUS INJURY OR DEATH COULD RESULT.
4. CONTROL CABLE WHICH HAVE MOISTURE INSIDE OF THEM AND OR HAVE FROZEN SHOULD BE REPLACED. DO NOT APPLY HEAT TO THAW OR DRY.
5. CONTROL CABLES ARE LUBRICATED FOR THE LIFE OF THE CABLE. DO NOT REMOVE THE SEALS OR LUBRICATE THE CABLE.
6. CONTROL CABLES ARE NOT REPAIRABLE. DO NOT ATTEMPT TO REPAIR THIS CABLE.

CAUTION

1. CONTROL CABLE IS DESIGNED TO BE CONTAMINANT RESISTANT. NOT CONTAMINANT PROOF. PROTECT CABLE FROM CONTAMINANTS SUCH AS GAS, OIL, DIESEL FUEL, DIRT AND CHEMICALS WHICH MAY DAMAGE THE CABLE.
2. PROTECT THE CONTROL CABLE FROM PHYSICAL BY PAINT, KINKING, VIBRATION, ECT., WHICH MAY DAMAGE THE CABLE.

ECO NO	REV	CHANGED FROM	BY	DATE	APVD	ECO NO	REV	CHANGED FROM	BY	DATE	APVD
4388	G	COTTER PIN WAS 064-5100-00-0	MAS	3-23-18	JLS	02-054	A	RELEASED TO PRODUCTION	JK	02-28-02	MAL
4841	H	ADDED GREASE FITTING	MAS	6-25-19	JLS	04-255	B	REMOVED 3/8-24 NUT FROM ROD END	MAB	10-25-04	MAL
						0489	C	REMOVED NYLON WASHER	KSM	11-27-08	MAL
						3633	D	WAS 064-0720-13-0	JSJ	01-14-16	JSJ
						3665	E	TOP PULL OPTION REMOVED. NOTE: 12 BORED FOR REGULAR SHIP REFERENCE. P/ALTERN POSITION FOR ADED. WAS GRADE 8081T	KTN	03-17-16	AJG
						3948	F	MOVED SPACER TO CLEVIS PIN WITH LINK ARM	DMB	02-16-17	JLS

REPORT ERRORS & CHANGES  
REMOVE ALL SHARP EDGES  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES.  
TOLERANCE ON:  
DECIMALS .XX ±.030  
.XXX ±.015  
ANGLES ± 1/2°  
NOT TO BE REPRODUCED OR USED TO  
MAKE OTHER DRAWINGS OR MACHINERY.  
DRAWN/DJG  
CHECKED/MAL  
DATE 12-11-01

HALE PRODUCTS, INC.  
A Unit of IDEX Corporation  
Conshohocken, PA 19428 USA  
TITLE MANUAL PUMP SHIFT OVERRIDE  
PARTS IDENTIFICATION  
AND INSTALLATION  
SIZE/FIRST USED ON DWG  
E MIDSHIP NO. 101-0850-73-0  
SCALE: FULL CAD LEVELS  
SHEET of