

MSD **IGNITION** **INSTALLATION INFORMATION**

MSD SPRINT CAR CRANK TRIGGER PN 7950, 7955, 7960, 7965, and PN 7970

Note: This kit contains all the parts necessary to install the MSD Pro-Mag Sprint Car Crank Trigger System.

Note: Before beginning the installation, please check the contents of the kit and verify that the following parts are included:

Water Pump Assembly – Parts List

- | | |
|--|--|
| 1 - Non-Magnetic 3/8 dia. Crank Trigger Pickup, 8159 | 2 - 4-40 x 3/16 Stainless Panhead Phillips, SCW20814 |
| 1 - Window – Clear - Timing, MSD20633 | 1 - Trigger Wheel (Stainless Steel), **ASY20629 |
| 1 - 3/8-24 Aluminum Jam Nut, NUT20585 | 1 - Retention Washer, MSD20574 |
| 1 - Pickup Slider ,MSD20573 | 1 - Coupling Spider, PRD20584 |
| 4 - 5/16 Washer, WAS20588 | 1 - Drive Hub (Stainless Steel), **MSD20575 |
| 1 - Water Pump Assembly (Small Pump), *MSD20563 | 1 - Worm Drive Clamp, HDW20589 |
| 4 - 5/16-24 x 2.25 Stainless SHCS, SCW20587 | |

* For the Large Water Pump Assembly, Substitute the Following Part Number:
Large Water Pump – MSD20564

** For Titanium Parts, Substitute the Following Part Numbers:
Titanium Trigger Wheel – ASY20695
Titanium Drive Hub – MSD20694

Front Cover Assembly – Parts List

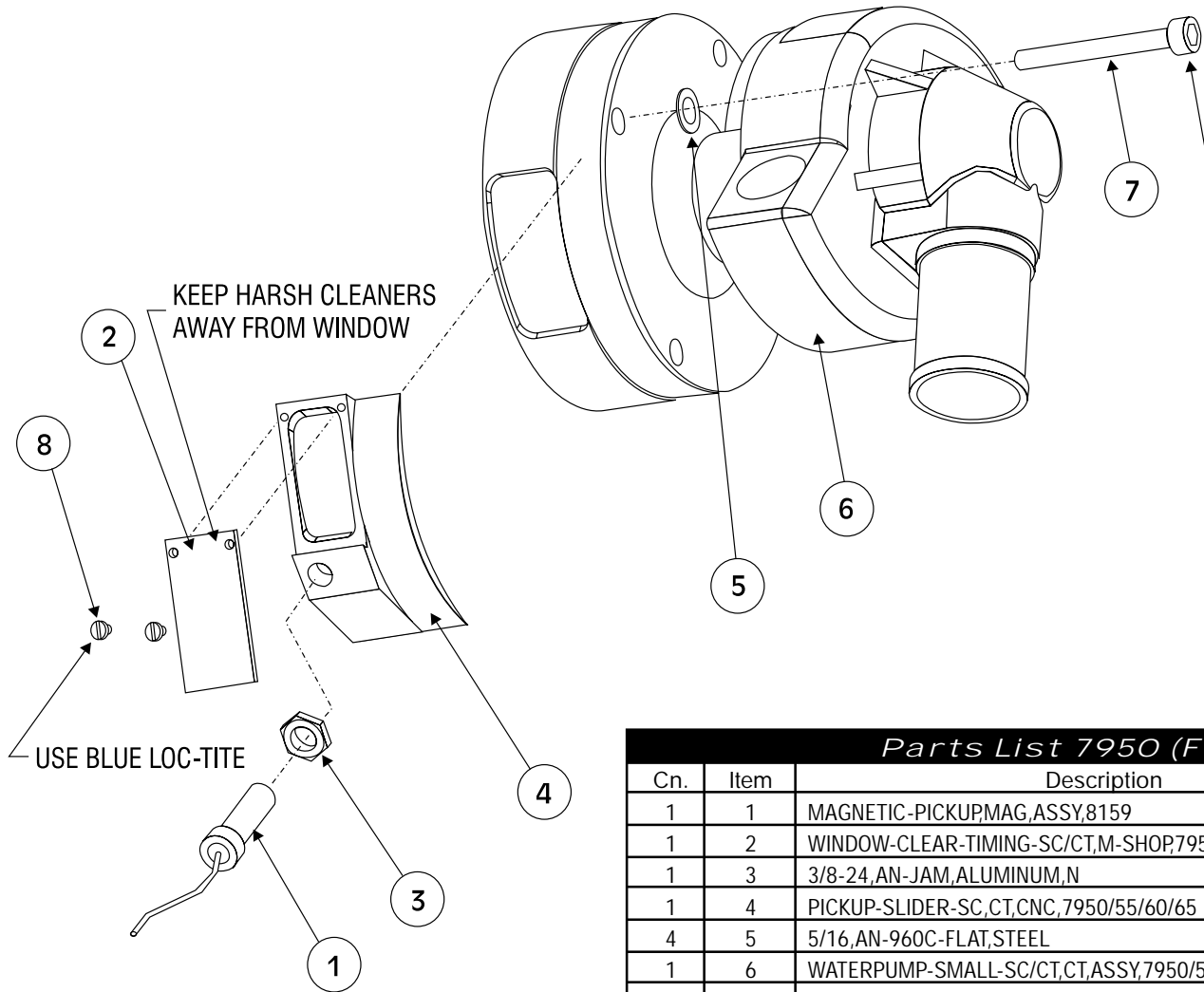
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|---|--|
| 10 - ¼-20 x 1.75 Stainless SHCS, SCW20509 | 1 - Roll Pin, Steel, .063Dia x .75L, HDW20503 |
| 10 - Washer, .265ID x .500OD x .022T, WAS20511 | 2 - Dowel Pin, Stainless Steel, .250Dia x .875L, HDW20505 |
| 2 - Dowel Pin, Stainless Steel, .250Dia x .625L, HDW20504 | 1 - Front Cover Spacer - Aluminum, MSD20502 |
| 4 - 5/16-24 x .375 Cup Point Set Screw, SS, SCW20510 | 1 - Oil Seal, 2.5OD x 1.75ID x .313L (Nat#742164V), HDW20506 |
| 2 - ¼-20 x .625 Stainless SHCS, SCW20508 | 3 - 10-32 x .250 Stainless BHCS, SCW20507 |
| 1 - Front Cover - Aluminum, MSD20501 | |

In the event that any parts are missing, please contact the MSD Pro Mag Department via mail or telephone at :

MSD Ignition
1490 Henry Brennan Drive
El Paso, Texas 79936
Phone: 915-857-5200
Fax: 915-857-3344

To ensure a reliable and trouble free installation, please review the following tips and recommendations:

- The bore of the trigger wheel MUST be honed to produce a 0.001-0.002" press fit on the crankshaft snout. Every crank will be different, so check the dimensions carefully before beginning the process.
- If precise timing marks are desired, it is advisable to scribe them during engine assembly when a positive piston stop can be utilized.
- The 0.250 x 7/8 dowel pins are supplied for use with Aluminum blocks only!! Cast iron blocks require 0.248 diameter pins. Please note that most gear drives are supplied with the correct pins and the ones in the MSD kit may not be needed.
- Silicone sealant (or equivalent) must be applied to the spacer and front cover sealing surfaces, as well as the front cover bolts, to prevent oil leaks and seepage.
- Install the three seal retention screws and the two timing window screws with Blue Loc-Tite or an equivalent thread locking compound. Heating the small screws with a soldering iron will allow for easier removal should it be necessary.
- Some engine cleaners and solvents will damage (cloud) the timing window. Avoid spraying them directly on the window.
- Mock up the entire water pump assembly before the final installation (i.e. BEFORE PRESSING ON THE TRIGGER WHEEL). Begin by stacking the coupling spider and the trigger wheel in the water pump drive. Install the pickup and slider bracket and snug the retention clamp. Adjust the air gap between the trigger wheel and the pickup until it is approximately .030". This is an APPROXIMATE distance and may need to be altered slightly. As a rule of thumb, run the largest air gap that will still allow the engine to start reliably. Once the optimum air gap has been established, measure and record the distance between the signal end of the pickup and the back of the slider bracket. In the event that the pickup and/or slider must be changed, this reference dimension can be used to adjust the air gap quickly and accurately.
- Do not forget to install the small spring pin in the front cover as it serves as the timing reference point.
- Use the supplied cup point set screws to plug unused oil pump mounting holes.
- This kit *requires the user to supply* a 7/16 – 20 Grade 8 or quality after market bolt to retain the trigger wheel. The length of the bolt will depend entirely upon the crankshaft design and manufacturer. Note that the bolt head cannot extend beyond coupling spider. Torque the bolt to 65 ft-lb.
- Depending on the desired water pump fitting orientation, it may be necessary to remove the housing in order to install two of the assembly mounting bolts and washers.
- To help prevent oil leaks, the front cover spacer is supplied with the two bottom holes drilled and tapped for ¼ -20 fasteners. In some cases, these will need to be enlarged and longer bolts substituted to ensure thread engagement in the gear drive plate or the front of the oil pan.



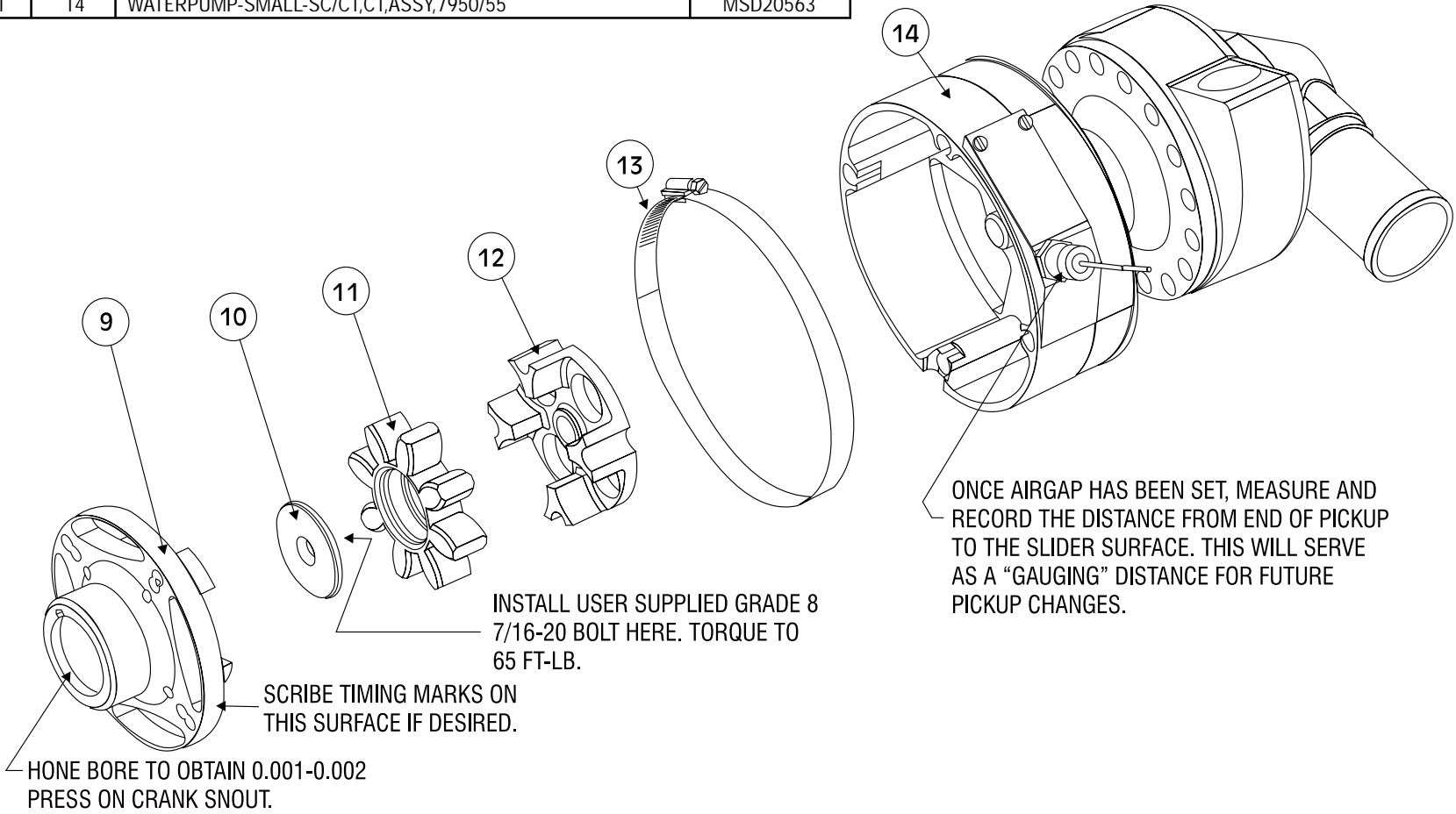
REMOVAL OF PUMP HOUSING
MAY BE NECESSARY TO INSTALL
TWO OF THESE BOLTS

Parts List 7950 (Figure 1)

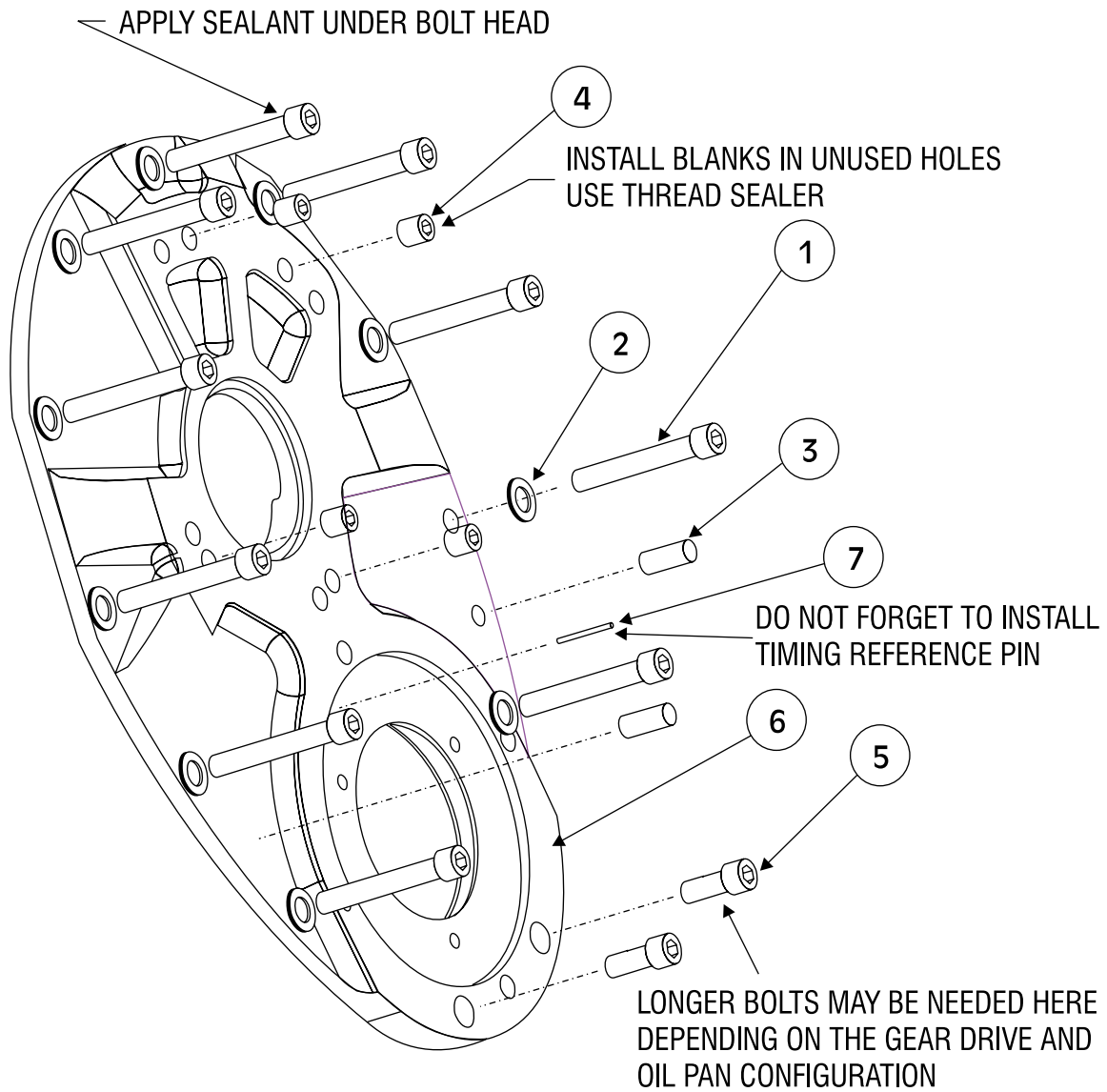
Cn.	Item	Description	MSD PN
1	1	MAGNETIC-PICKUP,MAG,ASSY,8159	PN 8159
1	2	WINDOW-CLEAR-TIMING-SC/CT,M-SHOP,7950/55/60/65	MSD20633
1	3	3/8-24,AN-JAM,ALUMINUM,N	NUT20585
1	4	PICKUP-SLIDER-SC,CT,CNC,7950/55/60/65	MSD20573
4	5	5/16,AN-960C-FLAT,STEEL	WAS20588
1	6	WATERPUMP-SMALL-SC/CT,CT,ASSY,7950/55	MSD20563
4	7	5/16-24X2.250,SHCS,STAINLESS-18-8,N	SCW20587
2	8	4-40X,188,PAN-PHIL,STAINLESS-18-8,N	SCW20814

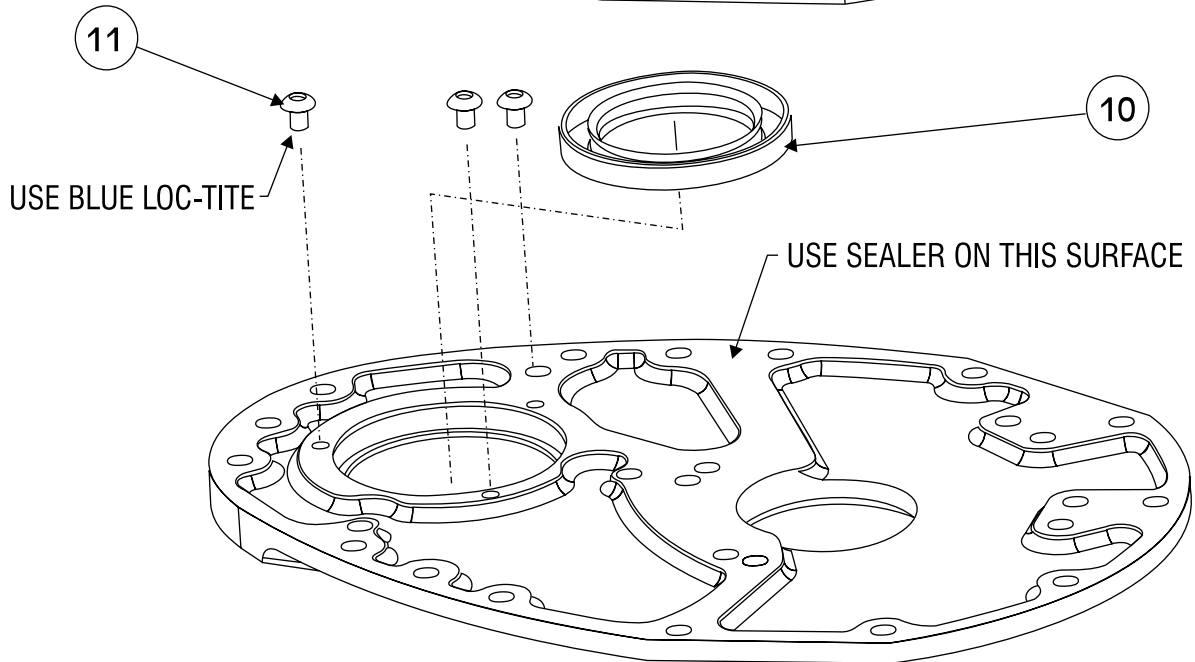
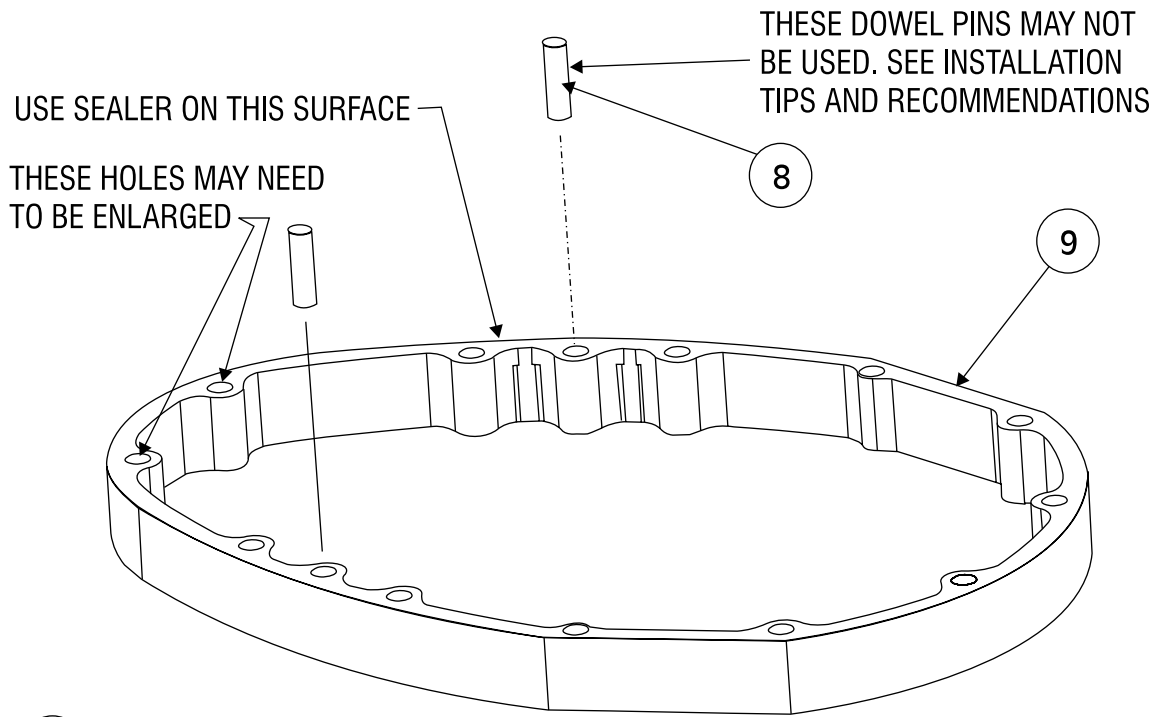
Parts List 7950 (Figure 2)

Cn.	Item	Description	MSD PN
1	9	WHEEL-TRIGGER-SS/CT,CT,ASSY,7950/60	ASY20629
1	10	WASHER-RETENTION-SC/CT,CT,CNC,7950	MSD20574
1	11	SPIDER-COUPLING, CT,7950/55/60/65	PRD20584
1	12	HUB-DRIVER-SS-SC/CT,CT,IH/CNC,7950/60	MSD20575
1	13	CLAMP-WORM-DRIVE,CT,7905/55/60/65	HDW20589
1	14	WATERPUMP-SMALL-SC/CT,CT,ASSY,7950/55	MSD20563



Parts List 7970 (Figure 1)			
Cn.	Item	Description	MSD PN
10	1	1/4-20X1.75 SHCS,18-8 STAINLESS	SCW20509
10	2	WASHER, .265IDX.5000DX.022T,AN-960C	WAS20511
2	3	PIN-DOWEL-STAINLESS STEEL, .250DIA X .625L	HDW20504
4	4	5/16-24X.375,CUP/SET,18-8 STAINLESS	SCW20510
2	5	1/4-20X3625,SHCS,18-8 STAINLESS	SCW20508
1	6	COVER-FRT-SB/CHEV-ALUM	MSD20501
1	7	PIN-ROLL,STEEL, .062DIA X.750L	HDW20501





Parts List 7970 (Figure 2)

Cn.	Item	Description	MSD PN
2	8	PIN-DOWEL-STAINLESS,STEEL, .250DIA X.875L	HDW20505
1	9	SPACER-FRT-COVER-SB/CH-ALUM	MSD20502
1	10	SEAL-OIL,2.50DX1.75IDX.313L,NAT#742164V	HDW20506
3	11	10-32X.250,BHCS,STAINLESS-18-8-N	SCW20507

