

## TECHNICAL MANUAL

### ILLUSTRATED PARTS BREAKDOWN NOSE LANDING GEAR DOOR 90 DEGREE GEARBOX ASSEMBLY

177370

1660-00-220-2810

177370-1

1680-00-298-8782

177370-2

1680-01-159-9590

CEI NO. MA0001A

DETAIL SPEC NO. 41669

(ATOS)

This publication supersedes T.O. 16G1-146-4 dated 20 April 1973.

**DISTRIBUTION STATEMENT:** Distribution authorized to the Department of Defense and US DoD contractors only (Administrative or Operational Use) (31 March 2005). Other requests for this document or questions concerning technical content shall be referred to WR-ALC/LTET, Robins AFB, GA 31098.

**WARNING:** This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751, et. seq.) or the Export Administration Act of 1979, as amended (Title 50, U.S.C., App 2401, et. seq.). Violations of these export laws are subject to severe criminal penalties.

**HANDLING AND DESTRUCTION NOTICE:** Comply with distribution statement and destroy by any method that will prevent disclosure of the contents or reconstruction of the document.

---

Published Under Authority of the Secretary of the Air Force

---

## 31 MARCH 2005

### 1. GENERAL.

This Illustrated Parts Breakdown, lists, illustrates, and describes all parts for the 177370, 177370-1 and 177370-2 Nose Landing Gear Door 90 Degree Gearbox Assemblies, manufactured by Curtiss Wright Flight Systems, Inc., Fairfield, NJ, 07006.

**2. GROUP ASSEMBLY PARTS LIST.**

The Group Assembly Parts List lists the 177370, 177370-1 and 177370-2 Gearbox Assemblies and its component details which are indented properly to show relationship to their next higher assembly. Attaching parts are listed directly following the part or assembly they attach, and are denoted by the symbol, (AP).

**3. FIGURE AND INDEX NUMBER.**

This column contains the assigned number of the illustration in which the assembly, subassembly or detail part is shown and the index numbers called out on the illustration.

**4. PART NUMBER COLUMN.**

This column contains the manufacturer-assigned part numbers of the assemblies, subassemblies and detail parts appearing in this breakdown. When a vendor item is listed, the vendor's part number is shown in the part number column.

**5. DESCRIPTION COLUMN.**

This column contains complete nomenclature in accordance with drawing titles in addition to any information required to effect a more complete identification of the part. Modifiers which clarify the noun are arranged in order of descending importance. The notation, for breakdown see figure, following the nomenclature indicates that a further breakdown of the assembly will be found on the figure noted.

**6. UNITS PER ASSEMBLY.**

The quantities shown in the Units Per Assembly column are, in the case of part numbers with nomenclature under indenture 1, the total quantity used per assembly at the location described by the nomenclature. Part numbers with the nomenclature under indenture other than 1, show the quantity used per next higher assembly. AR or NP as shown in this column indicates parts which are used as required or are non-procurable. The letters Ref indicate that the listing of the part or assembly is repeated here and that reference should be made to previous listing.

**7. USABLE ON CODE.**

The column entitled Usable on Code is used to show interchangeability of parts within the major assemblies covered in the particular breakdown. The absence of a code in the Usable on Code column indicates that the parts so shown are used as replacements on all models.

**8. SOURCE, MAINTENANCE, AND RECOVERABILITY (SMR) CODES.**

This manual contains Joint Military Service Uniform Source, Maintenance, and Recoverability (SMR) codes. Definitions of these SMR codes are available in T.O. 00-25-195.

**9. VENDOR PARTS.**

When a vendor item is listed, the vendor's part number is listed in the part number column. Following the description of this item, the vendors code is given. When a part is procurable from more than one vendor, the additional vendor part numbers and codes will be listed following the item under alternate parts. (Refer to paragraph 11 for vendor codes and addresses).

**10. ALTERNATE VENDOR ITEMS.**

Alternate vendor items shall be listed following the description.

## 11. VENDOR CODES AND ADDRESSES.

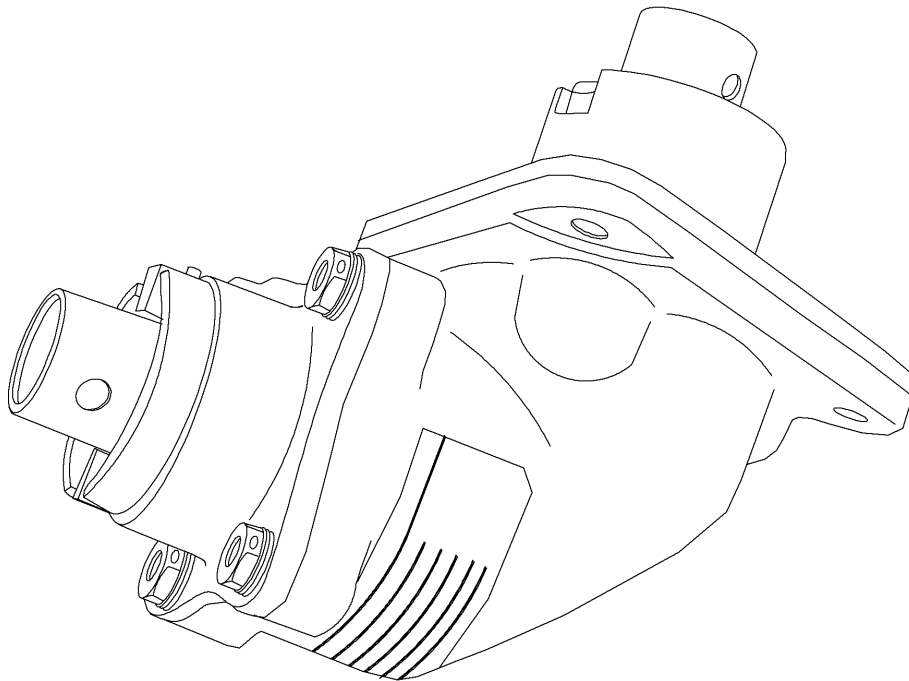
The absence of a code following a part description shall mean that the item is a prime contractor's part.

<b>Code No.</b>	<b>Manufacturer Name and Address</b>
07200	Precision Seal, Division of Garlock Inc. 43075 York Rd Gastonia, NC 28052
21335	Fafnir Bearings Company, Division of Textron Incorporated 37 Booth Street New Britain, CT 06050
38443	Marlin-Rockwell Company, Division of TRW Incorporated 402 Chandler Street Jamestown, NY 14701
40920	MPB Corporation Precision Park Keene, NH 03431
43334	New Departure-Hyatt Bearings, Division of General Motors Corp. Hayes Avenue Sandusky, OH 44870
43991	Norma-Hoffman Bearing Corp. Hamilton Avenue Stamford, CT 06904
52676	SKF Industries Incorporated Front Street and Erie Avenue Philadelphia, PA 19132

## 12. ABBREVIATIONS.

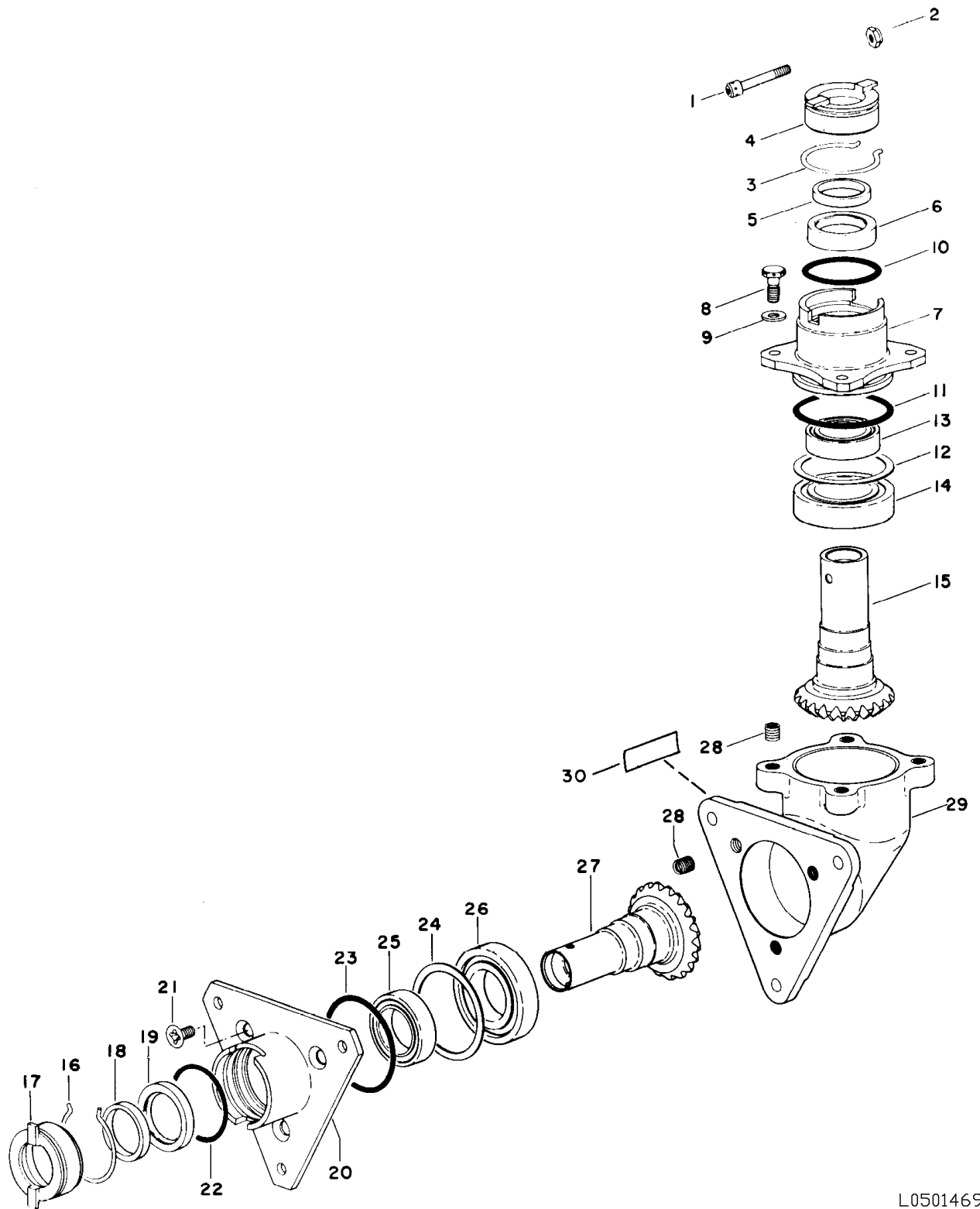
Abbreviations used within this Illustrated Parts Breakdown are as follows:

AR	As Required
Assy	Assembly
Dia	Diameter
Dwg	Drawing
LGD	Landing Gear Door
NLG	Nose Landing Gear
NHA	Next Higher Assembly
No.	Number
NP	Non-Procurement
Ref	Reference
Spec	Specification



L0501468

**Figure 1. Nose Landing Gear Door 90 Degree Gearbox Assembly**

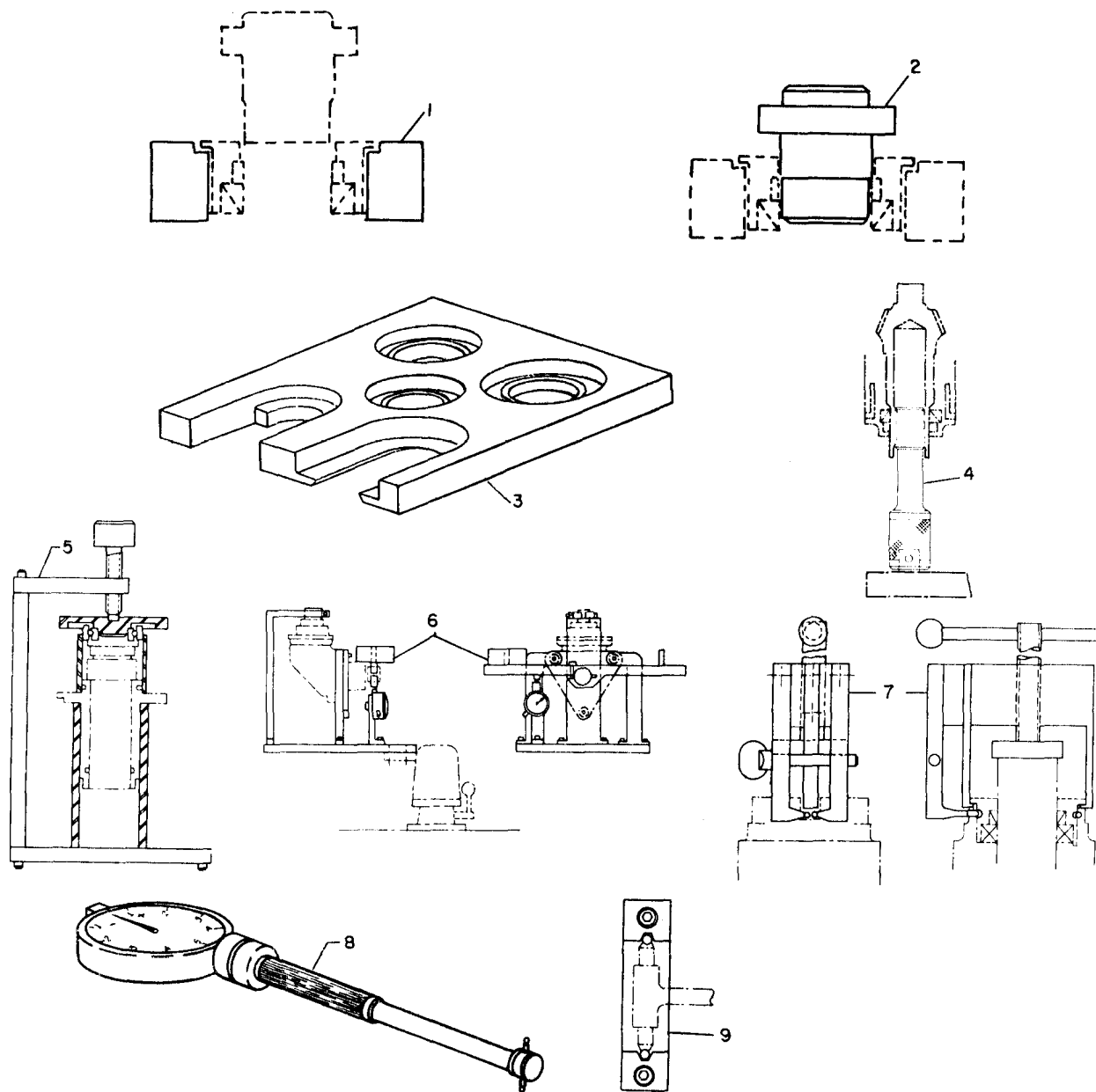


L0501469

Figure 2. Nose Landing Gear Door 90 Degree Angle Gearbox Assembly

FIGURE & INDEX/ SHEET NO.	PART NUMBER	CAGE	DESCRIPTION 1234567	UNITS PER ASSY	USABLE ON CODE	SMR CODE
2-	177370		GEARBOX ASSEMBLY, 90° Nose LGD.....	1	A	P1 L
	177370-1		GEARBOX ASSEMBLY, 90° Nose LGD.....	1	B	P1 L
	177370-2		GEARBOX ASSEMBLY, 90° Nose LGD.....	1	C	P1 L
1	AN173C12		. BOLT, Machine, close tolerance .....	1		P1 S
	178109-1	71791	. SCREW, Drilled socket Head (Alternate for .. AN173C12)	1		P1 S
2	MS17826-3		. NUT, Supersedes NAS679C3M.....	1		P1D S
	177909-2	71791	. NUT, (Alternate for MS17826-3) .....	1		P1D S
3	177297		. SPRING, Retaining seal .....	1		P1D S
	177804		. SEAL ASSEMBLY .....	1	A	
	177804-1		. SEAL ASSEMBLY .....	1	B,C	
4	177293		. . RETAINER, Seal .....	NP		P1D S
5	177296		. . PROTECTOR, Seal .....	NP	A	X1 S
	178747-1		. . SEAL .....	1	B,C	
	24164-7343	07200	. . SEAL (Alternate for 178747-1) .....	1	B,C	
6	177298		. . SEAL, Plain encased bearing .....	NP	A	X1 S
	178746-1		. . SEAL .....	1	B,C	P1 S
	2890-30832	07200	. . SEAL (Alternate for 178746-1) .....	1	B,C	
7	177359		. RETAINER, Bearing (AP) .....	1		P1D S
8	NAS1304-3H		. BOLT, Machine, close tolerance .....	4		P1D S
	177534-6	71791	. BOLT, Machine, close tolerance (Alternate ... for NAS1304-3H)	4		
9	AN960PD416		. WASHER (AP) .....	4		P1D S
10	MS29561-130		. PACKING, Preformed O-ring.....	1		P1 F
11	MS29561-135		. PACKING, Preformed O-ring.....	1		P1D S
12	177704-2		. SHIM .....	1		P1D S
13	1905S-17	38443	. BEARING, Ball, annular, single row, open .... type Curtiss Spec Control Dwg No. 177701- 81	1		P1 S
	6905	52676	. BEARING, Ball, annular, single row, open .... type (Alternate for 1905S-17)	1		
	9305K	21335	. BEARING, Ball, annular, single row, open .... type (Alternate for 1905S-17)	1		
	HDT005	40920	. BEARING, Ball, annular, single row, open .... type (Alternate for 1905S-17)	1		
	1905	43991	. BEARING, Ball, annular, single row, open .... type (Alternate for 1905S-17)	1		
14	106KS	38443	. BEARING, Ball, annular, single row, open .... type Curtiss Spec Control Dwg No. 177701- 87	1		P1D S
	6006J	52676	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	9106K	21335	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	3L06	43334	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	HDT106	40920	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	6106	43991	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
15	177278		. GEAR, Bevel, tee box .....	1		P1D L
	177278-10		. GEAR/PLUG ASSEMBLY .....	1	C	P1D
16	177297		. SPRING, Retaining seal .....	1		
	177804		. SEAL ASSEMBLY .....	NP	A	P1 F
	177804-1		. SEAL ASSEMBLY .....	1	B,C	P1 F
17	177293		. . RETAINER, Seal .....	NP		
18	177296		. . PROTECTOR, Seal .....	NP	A	

FIGURE & INDEX/ SHEET NO.	PART NUMBER	CAGE	DESCRIPTION 1234567	UNITS PER ASSY	USABLE ON CODE	SMR CODE
2- 18	178747-1		. . SEAL.....	1	B,C	
	24164-7343	07200	. . SEAL (Alternate for 178747-1) .....	NP	B,C	
19	177298		. . SEAL, Plain encased bearing .....	NP	A	
	178746-1		. . SEAL.....	1	B,C	
	2890-30832	07200	. . SEAL (Alternate for 178746-1) .....	1	B,C	
20	177358		. RETAINER, Bearing (AP) .....	1		P1D S
21	NAS517-4-0		. SCREW, Machined, 100° close tolerance, .... flat head	3		
	177536-1	71791	. SCREW, Machined, 100° close tolerance, .... flat head (Alternate for NAS517-4-0)	3		
22	MS9241-030		. PACKING, Preformed .....	1		P1D
	154587-1.614	71791	. PACKING, Preformed (Alternate for ..... MS9241-030)	1		P1D L
23	MS29561-135		. PACKING, Preformed, O-ring .....	1		
24	177704-2		. SHIM .....	1		
25	1905S-17	38443	. BEARING, Ball, annular, single row, open .... type Curtiss Spec Control Dwg No. 177701- 81	1		
	6905	52676	. BEARING, Ball, annular, single row, open .... type (Alternate for 1905S-17)	1		
	9305K	21335	. BEARING, Ball, annular, single row, open .... type (Alternate for 1905S-17)	1		
	HDT005	40920	. BEARING, Ball, annular, single row, open .... type (Alternate for 1905S-17)	1		
	1905	43991	. BEARING, Ball, annular single row, open .... type (Alternate for 1905S-17)	1		
26	106KS	38443	. BEARING, Ball, annular, single row, open .... type Curtiss Spec Control Dwg No. 177701- 87	1		
	6006J	52676	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	9106K	21335	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	3L06	43334	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	HDT106	40920	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
	6106	43991	. BEARING, Ball, annular, single row, open .... type (Alternate for 106KS)	1		
27	177278		. GEAR, Bevel, tee box .....	1	A,B	
	177278-10		. GEAR/PLUG ASSEMBLY .....	1	C	
	177437		. HOUSING/INSERT ASSEMBLY, Right ..... angle box, nose door	1		P1D L
28	MS21208F4-15		. INSERT, Screw thread .....	7		P1D S
29	177353		. HOUSING, Right angle, nose door .....	NP		X1 S
30	178117-31		. PLATE, Identification Supersedes 177499 ....	1	A,B	P1D S
	178117-96		. PLATE, Identification .....	1	C	P1D S



L0501470

Figure 3. Special Support Equipment



FIGURE & INDEX/ SHEET NO.	PART NUMBER	CAGE	DESCRIPTION 1234567	UNITS PER ASSY	USABLE ON CODE	SMR CODE
3- 1	ST5803		PLATE, Support (Part of kit ST792) .....	AR		
2	ST5804		INSERTER/REMOVER, Seal and protector ..... (Part of kit ST792)	AR		
3	ST5806		PLATE, Support (Part of kit ST792) .....	AR		
4	ST5808		ADAPTER, Torque Wrench .....	AR		
5	ST5902		FIXTURE, Gearbox (Part of kit ST798) .....	AR		
6	ST5903		ADAPTER, Gearbox .....	AR		
7	ST5999		REMOVAL TOOL, Seal .....	AR		
8	ST6278		GAGE, Internal Spline (Part of kit ST799) .....	AR		
9	ST6366-2		SETMASTER, Internal (Part of kit ST799) .....	AR		

THE END

