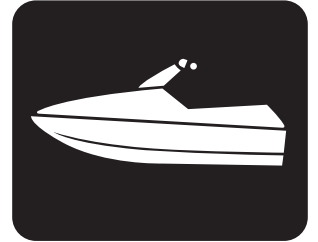




YAMAHA



2005

SPECIAL SERVICE
TOOL LIST (E)
LISTE DES OUTILS
D'ENTRETIEN SPÉCIAUX (F)
LISTA DE HERRAMIENTAS
ESPECIALES DE SERVICIO (ES)

298164

90894-62981-64

SPECIAL SERVICE TOOL LIST
©2004 Yamaha Motor Co.,Ltd.
1st Edition, August 2004
All rights reserved.
Any reprinting or unauthorized use
without the written permission of
Yamaha Motor Co.,Ltd.
is expressly prohibited.
Printed in Japan

LISTE DES OUTILS D'ENTRETIEN SPÉCIAUX
©2004 Yamaha Motor Co., Ltd.
1ère Edition, Août 2004
Tous droits réservés.
Toute réimpression ou utilisation
sans la permission écrite de la
Yamaha Motor Co., Ltd.
est formellement interdite.
Imprimé en Japon

**LISTA DE HERRAMIENTAS ESPECIALES DE
SERVICIO**
©2004 Yamaha Motor Co., Ltd.
1ª edición, Agosto 2004
Reservados todos los derechos.
Se prohíbe expresamente toda reimpresión
o utilización no autorizada de este manual
sin el consentimiento por escrito de
Yamaha Motor Co., Ltd.
Impreso en Japón

NOTICE

This list of special service tools has been prepared for quick and easy reference, to enable you to find the appropriate service tool(s) for each model.

The special service tools have been improved and upgraded for each new model. However, your existing service manual does not include the latest information. Also, the list does not cover the models of which information could not be obtained at the time of preparation of the manual. The information will be provided through the next issue of the special service tool list.

Outboard motor models	: All models to be released only in this fiscal year (except those of which information can not be obtained)
Watercraft models	: All models including those released in several years ago to the latest models (The new models of this fiscal year may be excluded because the development period of watercrafts is different from that of the outboard motors.)

The special service tools mentioned in the service manual of each model are listed here.

Tool numbers in round brackets indicate current tool numbers, and will be replaced with the replacement tool numbers (not in brackets) when stock runs out.

In addition, the tool names always appear in English in this manual.

MANUAL FORMAT APPLICATION CHARTS

Tool numbers and the outboard motor/watercraft models to which they apply are shown in the charts.

Tools, which are to be supplied in an assembly, are listed with a dot (●) in front of the tool name.

(●) :Dots in round brackets indicate that the particular tool is not absolutely necessary and which can be substituted by another tool.

[] :Square brackets indicate that the tool applies only to models in square brackets in the corresponding column header.

TOOL DESCRIPTIONS

The tool number, name, illustration, and description of its use are shown. The required tool size is also given to assist in the identification of the correct tool.

The construction and meaning of each section are as follows:

Measuring tool	: Mechanical or electrical precision tools (Some measuring tools may be listed in one of the following sections instead.)
Engine servicing	: Special tool for engine servicing
Lower unit/jet pump servicing	: Special tool for lower unit/jet pump servicing
Shim selection, PTT tool	: Special tool for shim selection and power trim and tilt unit servicing

REPAIR KITS (RECONDITION TOOL)

The following kits can be used for repairing/replacing damaged parts, avoiding the need to replace the whole unit. Some skill is required to use these.

“Heli-vert” kit	: For reconditioning damaged bolt threads
Marine terminal kit	: For repairing conventional marine round plug/socket and eye terminals This water-resistant and rust-resistant connector type, although similar, is different from that on a motorcycle.
Coupler kit	: For repairing water-resistant multiple pole couplers

NOTE:

Identify the correct coupler and do not try to use a coupler of the incorrect type.

INDEX

Find the desired tool through its number (part number) in order to determine the page in the APPLICATION CHARTS and TOOL DESCRIPTIONS, where a more detailed explanation of the tool can be found.

NOTE

Cette liste d'outils spéciaux a été préparée afin que les mécaniciens puissent trouver rapidement et aisément le ou les outils spéciaux requis selon les modèles.

Yamaha a modifié et amélioré certains outils d'entretien spéciaux pour les nouveaux modèles. Toutefois, votre manuel d'atelier existant ne comprend pas ces nouvelles informations. De même, la liste ne concerne pas les modèles dont on ne disposait pas d'informations au moment de la préparation du manuel. Les informations seront présentées dans la prochaine publication de la liste d'outils spéciaux.

Modèles de moteur hors-bord	: Tous les modèles à sortir cette année fiscale (à l'exception de ceux à propos desquels on ne peut pas obtenir d'informations)
Modèles de scooters nautiques	: Tous les modèles de ceux sortis il y a plusieurs années aux modèles les plus récents (Les nouveaux modèles de cette année fiscale peuvent être exclus car la période de développement des scooters nautiques est différente de celle des moteurs hors-bord)

Les outils d'entretien spéciaux mentionnés dans le manuel d'atelier pour chaque modèle sont mentionnés ici.

Les numéros d'outils entre parenthèses indiquent les numéros des outils actuels et seront remplacés par les numéros des outils de rechange (pas entre parenthèses) à l'épuisement du stock.

Le nom des outils figure en anglais.

ORGANISATION DU MANUEL

TABLEAUX D'APPLICATION (APPLICATION CHARTS)

Le numéro des outils spéciaux ainsi que les modèles de moteur hors-bord/de scooter nautique auxquels les outils spéciaux s'appliquent sont indiqués dans des tableaux.

Dans ce catalogue, les outils qui sont fournis dans un ensemble sont précédés d'un point (•).

(•): Les points entre parenthèses indiquent que l'outil n'est pas absolument nécessaire et qu'il peut être remplacé par un autre outil.

[] : Les crochets indiquent que l'outil ne s'applique qu'aux modèles qui sont entre crochets dans l'en-tête de colonne correspondante.

FONCTION DES OUTILS (TOOL DESCRIPTIONS)

Les informations données pour chacun de ces outils comprennent leur numéro, leur nom, une représentation graphique et leur fonction.

Pour plus de commodité d'identification des outils, la taille requise pour l'outil est également indiquée.

Les outils spéciaux sont répartis dans les sections suivantes :

Outil de mesure	: Outil de précision mécanique ou électronique (Tous les outils de mesure ne figurent pas nécessairement dans cette section. Contrôler la liste des sections suivantes.)
Entretien du moteur	: Outil spécial requis pour l'entretien du moteur
Entretien du boîtier d'hélice/ pompe de propulsion	: Outil spécial requis pour l'entretien du boîtier d'hélice/pompe de propulsion
Sélection de cales, outil pour PTT	: Outil spécial requis pour la sélection de cales et l'entretien du système d'assiette et d'inclinaison assistées pour PTT

KITS DE REPARATION (OUTIL DE RECONDITIONNEMENT)

Les kits suivants permettent de réparer/remplacer des pièces endommagées et d'ainsi éviter de devoir remplacer les assemblages.

L'emploi de ces kits de réparation requiert certaines compétences.

Kit de taraudage	: Pour le reconditionnement des filetages de boulon endommagés
Kit de bornes marines	: Pour la réparation des fiches/prise rondes marines classiques et les cosses. Ce type de connecteur résistant à l'eau et à la corrosion est différent de celui d'une motocyclette, bien qu'il soit similaire.
Kit de coupleur	: Pour la réparation de coupleurs à multipôles étanches

N.B.:

Identifiez le coupleur correct et n'essayez pas d'utiliser un coupleur d'un type incorrect.

INDEX

Les outils sont classés d'après leur numéro. Se servir de ce numéro pour trouver la page des sections Tableaux d'application (APPLICATION CHARTS) et Fonction des outils (TOOL DESCRIPTIONS) contenant les renseignements détaillés de l'outil recherché.

AVISO

Esta lista de herramientas de servicio especiales ha sido preparada para encontrar rápida y fácilmente la(s) herramienta(s) de servicio necesarias para cada modelo respectivo.

Las herramientas de servicio especiales han sido mejoradas para ser utilizadas en los nuevos modelos.

Sin embargo, su manual de servicio existente no cubre la información más reciente. Además, la lista no incluye los modelos sobre los cuales no pudo obtenerse información en el momento de preparación del manual. Esta información se facilitará en la próxima publicación de la lista de herramientas especiales de servicio.

Modelos de motores fueraborda	: Sólo todos los modelos que se lancen en este año fiscal (excepto aquellos sobre los cuales no puede obtenerse información)
Modelos de embarcaciones	: Todos los modelos, incluidos los lanzados, desde hace varios años hasta los últimos modelos (los modelos nuevos de este año fiscal pueden ser excluidos porque el período de desarrollo de las embarcaciones es distinto del de los motores fueraborda).

Aquí se enumeran las herramientas especiales de servicio mencionadas en el manual de servicio de cada modelo.

Los números de herramientas entre paréntesis indican los números de las herramientas nuevas y deben sustituirse por los números de las herramientas de repuesto (no entre paréntesis) cuando se agoten las existencias.

Además, los nombres de las herramientas siempre aparecen en inglés en este manual.

FORMATO DEL MANUAL TABLAS DE APLICACIÓN

En las tablas se muestran los números de herramienta y los modelos aplicables de motores fueraborda y moto de agua.

Las herramientas suministradas como conjunto se señalan con un punto (•) que precede al nombre de la herramienta.

(●) : Los puntos entre paréntesis indican que no es absolutamente necesaria la herramienta específica y que puede sustituirse por otra herramienta.

[] : Los corchetes indican que la herramienta se aplica sólo a los modelos entre corchetes en el encabezado de columna correspondiente.

DESCRIPCION DE LAS HERRAMIENTAS

Se muestran el número, el nombre, y la ilustración de las herramientas, y la descripción de su utilización.

Se indica también el tamaño de la herramienta necesaria para ayudarle a identificarla con más facilidad.

La construcción y el significado de los elementos son los siguientes:

Herramienta de medición	: Herramientas de precisión mecánicas o eléctricas (Algunas herramientas de medición pueden estar enumeradas en una las secciones siguientes.)
Servicio del motor	: Herramienta especial para el servicio del motor
Servicio de la unidad inferior/ bomba de inyección	: Herramienta especial para el servicio de la unidad inferior/bomba de inyección
Selección de laminillas, herramienta PTT	: Herramienta especial para la selección de laminillas y el servicio de la unidad de estibado e inclinación motorizados

JUEGOS DE REPARACION (HERRAMIENTA DE REACONDICIONAMIENTO)

Los juegos siguientes pueden utilizarse para la reparación/reemplazo de las partes dañadas para evitar el reemplazo de toda la unidad. Para emplear estos juegos se necesita experiencia práctica.

Juego "Heli-sert"	: Para reacondicionar las roscas de los pernos dañadas
Juego de terminales marinos	: Para reparar los terminales de ojal y acopladores redondos convencionales de uso marino. Este tipo de conector resistente al agua e inoxidable, aunque similar, es diferente del de una motocicleta.
Juego de acoplador	: Para reparar los acopladores multipolares resistentes al agua

NOTA:

Identifique el acoplador correcto y no trate de utilizar un acoplador del tipo incorrecto.

ÍNDICE

Podrá encontrar las herramientas que busca empleando su número (numero de parte) para poder determinar la página de las TABLAS DE APLICACIÓN y de la DESCRIPCIÓN DE LAS HERRAMIENTAS, donde se da una explicación más detallada de las herramientas.

CONTENTS

1.APPLICATION CHART

OUTBOARDS MOTOR TOOL	1-1
MEASURING TOOL/PEAK VOLTAGE MEASUREMENT (2 stroke model)	1-1
MEASURING TOOL/PEAK VOLTAGE MEASUREMENT (Enduro/Kerosene model, 4 stroke model)	1-3
ENGINE SERVICE (2 stroke model)	1-5
ENGINE SERVICE (Enduro/Kerosine nodel, 4-stroke model)	1-7
ENGINE SERVICE (4 stroke model)	1-9
VALVE SEAT CUTTER (Refering)	1-10
ENGINE SERVICE (Test propeller)	1-11
ENGINE SERVICE (Crankshaft disassembly and reassembly)	1-13
LOWER UNIT SERVICE (2 stroke model)	1-15
LOWER UNIT SERVICE (Enduro/Kerosine nodel, 4-stroke model)	1-19
SHIM SELECTION/PTT TOOL (2 stroke model)	1-23
SHIM SELECTION/PTT TOOL (Enduro/Kerosine nodel, 4-stroke model)	1-25
 WATERCRAFT TOOL	1-27
MEASURING TOOL/PEAK VOLTAGE MEASUREMENT	1-27
ENGINE SERVICE	1-27
ENGINE SERVICE/JET PUMP SERVICE	1-29

2.TOOL DESCRIPTION

MEASURING TOOL	2-1
PEAK VOLTAGE MEASUREMENT	2-7
ENGINE SERVICE	2-8
4 stroke	2-13
Watercraft	2-16
Crankshaft disassembly and reassembly	2-17
Test propeller	2-18
LOWER UNIT SERVICE/JET PUMP SERVICE	2-19
SHIM SELECTION	2-29
PTT TOOL	2-31

3.RECONDITION TOOL

HELI-SERT KIT (90890-05155)	3-1
MARINE TERMINAL KIT (90890-05354)	3-2
COUPLER KIT A (61A) (90890-05353)	3-3
OPTIONAL PARTS	3-4

4.INDEX

INDEX	4-1
-------------	-----

TABLE DES MATIERES

1. TABLEAUX D'APPLICATION (APPLICATION CHART)

OUTILS POUR LES MOTEURS HORS-BORD	1-1
OUTIL DE MESURE/MESURE DE CRÊTES DE TENSION (modèle 2 temps)	1-1
OUTIL DE MESURE/MESURE DE CRÊTES DE TENSION (modèle enduro/kérosène model, modèle 4 temps)	1-3
D'ENTRETIEN MOTEUR (modèle 2 temps)	1-5
D'ENTRETIEN MOTEUR (modèle enduro/kérosène model, modèle 4 temps)	1-7
D'ENTRETIEN MOTEUR (modèle 4 temps)	1-9
FRAISE A SIEGE DE SOUPAPE (référence)	1-10
D'ENTRETIEN MOTEUR (Hélices d'essai)	1-11
D'ENTRETIEN MOTEUR (Dépose et le remontage du vilebrequin)	1-13
D'ENTRETIEN BOÎTIER D'HÉLICE (modèle 2 temps)	1-15
D'ENTRETIEN BOÎTIER D'HÉLICE (modèle enduro/kérosène model, modèle 4 temps)	1-19
SÉLECTION DE CALES/OUTIL POUR PTT (modèle 2 temps)	1-23
SÉLECTION DE CALES/OUTIL POUR PTT (modèle enduro/kérosène model, modèle 4 temps)	1-25
 OUTILS POUR LES SCOOTER NAUTIQUES	1-27
OUTIL DE MESURE/MESURE DE CRÊTES DE TENSION	1-27
D'ENTRETIEN MOTEUR	1-27
D'ENTRETIEN MOTEUR/D'ENTRETIEN POMPE DE PROPULSION	1-29

2. FONCTION DES OUTILS (TOOL DESCRIPTION)

OUTIL DE MESURE	2-1
MESURE DE CRÊTES DE TENSION	2-7
D'ENTRETIEN MOTEUR	2-8
4 temps	2-13
Scooter Nautiques	2-16
Dépose et le remontage du vilebrequin	2-17
Hélices d'essai	2-18
D'ENTRETIEN BOÎTIER D'HÉLICE/D'ENTRETIEN POMPE DE PROPULSION	2-19
SÉLECTION DE CALES	2-29
OUTIL POUR PTT	2-31

3. OUTIL DE REVISION (RECONDITION TOOL)

KIT DE TARAUDAGE (90890-05155)	3-1
KIT DE BORNES (90890-05354)	3-2
KIT DE COUPLEURS A (61A) (90890-05353)	3-3
PIÈCES EN OPTION	3-4

4. INDEX (INDEX)

INDEX	4-1
-------------	-----

CONTENIDO

1. GRÁFICAS DE APLICACIÓN (APPLICATION CHART)

HERRAMIENTAS PARA MOTORES DE FUERA DE BORDA	1-1
HERRAMIENTA DE MEDICIÓN/MEDICIÓN DE LA TENSIÓN PICO (modelo de 2 tiempos)	1-1
HERRAMIENTA DE MEDICIÓN/MEDICIÓN DE LA TENSIÓN PICO (modelo Enduro/Keroseno, modelo de 4 tiempos)	1-3
SERVICIO DEL MOTOR (modelo de 2 tiempos)	1-5
SERVICIO DEL MOTOR (modelo Enduro/Keroseno, modelo de 4 tiempos)	1-7
SERVICIO DEL MOTOR (modelo de 4 tiempos)	1-9
CORTADOR DE ASIENTO DE VÁLVULA (referencia)	1-10
SERVICIO DEL MOTOR (Hélices de prueba)	1-11
SERVICIO DEL MOTOR (Desmontaje yel montaje del cigüeñal)	1-13
SERVICIO DE UNIDAD IN FERIOR/BOMBA DE INYECCIÓN (modelo de 2 tiempos) ...	1-15
SERVICIO DE UNIDAD IN FERIOR/BOMBA DE INYECCIÓN (modelo Enduro/Keroseno, modelo de 4 tiempos)	1-19
SELECCIÓN DE LAMINILLAS/HERRAMIENTA PTT (modelo 2 tiempos)	1-23
SELECCIÓN DE LAMINILLAS/HERRAMIENTA PTT (modelo Enduro/Keroseno, modelo de 4 tiempos)	1-25
HERRAMIENTAS PARA MOTO DE AGUA	1-27
HERRAMIENTA DE MEDICIÓN/MEDICIÓN DE LA TENSIÓN PICO	1-27
SERVICIO DEL MOTOR	1-27
SERVICIO DEL MOTOR/ESERVICIO DE BOMBA DE INYECCIÓN	1-29

2. DESCRIPCIÓN DE LAS HERRAMIENTA (TOOL DESCRIPTION)

HERRAMIENTA DE MEDICIÓN	2-1
MEDICIÓN DE LA TENSIÓN PICO	2-7
SERVICIO DEL MOTOR	2-8
4 tiempos	2-13
Moto de agua	2-16
Desmontaje yel montaje del cigüeñal	2-17
Hélices de prueba	2-18
SERVICIO DE UNIDAD IN FERIOR/BOMBA DE INYECCIÓN	2-19
SELECCIÓN DE LAMINILLAS	2-29
HERRAMIENTA PTT	2-31

3. HERRAMIENTAS REACONDICION (RECONDITION TOOL)

JUEGO HELI-SERT (90890-05155)	3-1
JUEGO DE TERMINALES MARINOS (90890-05354)	3-2
JUEGO DE ACOPLADOR A (61A) (90890-05353)	3-3
PARTE DE OPTIONAL	3-4

4. ÍNDICE (INDEX)

ÍNDICE	4-1
--------------	-----

**OUTBOARDS MOTOR TOOL
MEASURING TOOL/PEAK VOLTAGE MEASUREMENT
(2 stroke model)**

Tool No. 90890-	MODEL	2 Stroke model											
		2B 2C	3A	4AC 4AS 5C 5CS	6C 8C	9.9F 13.5A 15F	20C	20D 25N	25B 25X 30H	30D	40V 40Y 50H	55B	50G 60F 70B
MEASURING TOOL													
01252	Dial gauge set	●	●	●	●	●	●	●	●	●	●	●	●
03112	Pocket tester	●	●	●	●	●	●	●	●	●	●	●	●
03141	Timing light	●	●	●	●	●	●	●	●	●	●	●	●
03160	Compression gauge	●	●	●	●	●	●	●	●	●	●	●	●
03174	Digital circuit tester	●	●	●	●	●	●	●	●	●	●	●	●
06754	Ignition tester	●	●	●	●	●	●	●	●	●	●	●	●
06756	Vacuum/pressure pump gauge set	●	●	●	●	●	●	●	●	●	●	●	●
06757	Throttle sensor adjusting lead FWY-3										●		
06865	Diagnostic flash indicator B												
06864	Diagnostic flash adapter 4												
06760	Digital tachometer	●	●	●	●	●	●	●	●	●	●	●	●
06840	Leakage tester	●	●	●	●	●	●	●	●	●	●	●	●
06786	Fuel pressure gauge												
06942	Fuel pressure gauge adapter B												
06704	Digital caliper	●	●	●	●	●	●	●	●	●	●	●	●
03016	Cylinder gauge 35 - 60	●	●	●	●	●	●	●	●	●	●	●	●
06759	Cylinder gauge 50 - 100			(●)	(●)	(●)	●	●	●	(●)	●	●	●
03006	Outside micrometer 0 - 25	●	●	●	●	●	●	●	●	●	●	●	●
03007	Outside micrometer 25 - 50	●	●	●	●	●	●	●	●	(●)	(●)	●	●
03008	Outside micrometer 50 - 75				●	●	●	●	●	●	●	●	●
03009	Outside micrometer 75 - 100											●	●
03010	Inside micrometer 5 - 25	●	●	●	●	●	●	●	●	●	●	●	●
03180	Thickness gauge	●	●	●	●	●	●	●	●	●	●	●	●
03107	Crankshaft aligner	●	●	●	●	●	●			●			
06563	Compression gauge extension M14												
PEAK VOLTAGE MEASUREMENT													
03172	Peak voltage adapter B	●	●	●	●	●	●	●	●	●	●	●	●
06867 (06767)	Test harness FWY-2										●		●
06868 (06768)	Test harness EJ-II-2												
06857 (06757)	Throttle sensor adjusting lead FWY-3										●		
06869 (06769)	Test harness EJ-II-3												
06870 (06770)	Test harness SMT250-3												
06871 (06771)	Test harness FWY-4												
06875 (06775)	Test harness AMP-4												
06872 (06772)	Test harness FWY-6												
06879 (06779)	Test harness FWY-8												
06887 (06787)	Test harness FW13613-2												
06888 (06788)	Test harness FW13613-1												
06790	Test harness FSW-6												
06791	Test harness FWY-3-L												
06792	Test harness SMHW090-2												
06793	Test harness SMHW099-3												
06861	Test harness SM6195043												
06846	Test harness QLW-3												
06847	Test harness QLWD-3												
06848	Test harness FSW-6A												
YAMAHA DIAGNOSTIC SYSTEM													
60V-85300-02	Yamaha Diagnostic System (KIT)												
60V-WS853-02	Yamaha Diagnostic System(CD-ROM) *5												

*1 V4 :115B, 115C, 130B, 140B, 140C

*2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G

*3 Electronic fuel injected model only

*4 2 stroke model

*5 Up-date CD-ROM only

APPLICATION CHART

Tool No. 90890-	2 Stroke model															
	55D 75A 75B 85A	75C 80A 90A	V4*1	L130B	V6*2	D150N	150A 175A 200A	L150F L150J L200F L200J	L150A L200A	225C 250A 225F 250B	L225C L250A (L225F) (L250B)	Z150P Z150Q Z175G Z175H Z200N Z200P	LZ150P LZ200N	Z225H Z250F	Z250D Z300A Z300B	LZ250D LZ300A
01252	●	●	●	●	●	●	●	●	●	●	●					
03112	●	●	●	●	●	●	●	●	●	●	●					
03141	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03160	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03174	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06754	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06756	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06757	●	●			●	●	●	●	●	●	●	●	●	●	●	●
06865					●	●	●	●	●	●	●	●	●	●	●	●
06864																
06760	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06840	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06786					●*3			●*3			[●]	●	●	●	●	●
06942																
06704	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03016																
06759	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03006	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03007	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03008																
03009	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03180	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03107																
06563																
03172	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06867 (06767)		●			●	●				●	●	●	●	●	●	●
06868 (06768)					●	●										
06857 (06757)	●	●			●	●	●	●	●	●	●	●	●	●	●	●
06869 (06769)					●	●		●			[●]	●	●	●	●	●
06870 (06770)			●	●	●	●		●		●	●					
06871 (06771)	●		●	●	●	●	●	●	●	●	●					
06875 (06775)																
06872 (06772)					●	●	●		●	●	●					
06879 (06779)												●	●	●	●	●
06887 (06787)												●	●	●	●	●
06888 (06788)												●	●	●	●	●
06790																
06791																
06792																
06793																
06861												●	●	●	●	●
06846																
06847																
06848																
60V-85300-02												●	●	●	●	●
60V-WS853-02												●	●	●	●	●

APPLICATION CHART

MEASURING TOOL/PEAK VOLTAGE MEASUREMENT (Enduro/Kerosene model, 4 stroke model)

Tool No. 90890-	MODEL	Enduro/Kerosene model										4 Stroke model		
		E8D EK8D	E9.9D E15D EK9.9D EK15D EK9.9J EK15P EK9.9H EK15N	E25B EK25B E30H	40G** E40G EK40G	E40X 40X**	40J** K40J	E48C E55C	E60H K50E	E60J E65A E75B	E115A	F2.5A	F4A	F6A F6B F8C
MEASURING TOOL														
01252	Dial gauge set	●	●	●	●	●	●	●	●	●	●	●	●	●
03112	Pocket tester	●	●	●	●	●	●	●	●	●	●	●	●	●
03141	Timing light	●	●	●	●	●	●	●	●	●	●	●	●	●
03160	Compression gauge	●	●	●	●	●	●	●	●	●	●	●	●	●
03174	Digital circuit tester	●	●	●	●	●	●	●	●	●	●	●	●	●
06754	Ignition tester	●	●	●	●	●	●	●	●	●	●	●	●	●
06756	Vacuum/pressure pump gauge set	●	●	●	●	●	●	●	●	●	●	●	●	●
06757	Throttle sensor adjusting lead FWY-3								●					
06865	Diagnostic flash indicator B													
06864	Diagnostic flash adapter 4													
06760	Digital tachometer	●	●	●	●	●	●	●	●	●	●	●	●	●
06840	Leakage tester	●	●	●	●	●	●	●	●	●	●	●	●	●
06786	Fuel pressure gauge													
06942	Fuel pressure gauge adapter B													
06704	Digital caliper	●	●	●	●	●	●	●	●	●	●	●	●	●
03016	Cylinder gauge 35 - 60	●	●										●	●
06759	Cylinder gauge 50 - 100	(●)	(●)	●	●	●	●	●	●	●	●	(●)		
03006	Outside micrometer 0 - 25	●	●	●	●	●	●	●	●	●	●	●	●	●
03007	Outside micrometer 25 - 50	●	●	●	●	●	●	●	●	●	●	●	●	●
03008	Outside micrometer 50 - 75	●	●	●									●	●
03009	Outside micrometer 75 - 100				●	●	●	●	●	●	●			
03010	Inside micrometer 5 - 25	●	●	●	●		●	●	●	●	●	●	●	●
03180	Thickness gauge	●	●	●	●		●	●	●	●	●	●	●	●
03107	Crankshaft aligner	●	●	●	●	●	●	●	●	●	●	●	●	●
06563	Compression gauge extension M14													
PEAK VOLTAGE MEASUREMENT														
03172	Peak voltage adapter B	●	●	●	●	●	●	●	●	●	●	●	●	●
06867 (06767)	Test harness FWY-2													
06868 (06768)	Test harness EJ-II-2													
06857 (06757)	Throttle sensor adjusting lead FWY-3								●					
06869 (06769)	Test harness EJ-II-3													
06870 (06770)	Test harness SMT250-3													
06871 (06771)	Test harness FWY-4				●	●	●			●	●			
06875 (06775)	Test harness AMP-4							●						
06872 (06772)	Test harness FWY-6													
06879 (06779)	Test harness FWY-8													
06887 (06787)	Test harness FW13613-2													
06888 (06788)	Test harness FW13613-1													
06790	Test harness FSW-6													
06791	Test harness FWY-3-L													
06792	Test harness SMHW090-2													
06793	Test harness SMHW099-3													
06861	Test harness SM6195043													
06846	Test harness QLW-3													
06847	Test harness QLWD-3													
06848	Test harness FSW-6A													
YAMAHA DIAGNOSTIC SYSTEM														
60V-85300-02	Yamaha Diagnostic System (KIT)													
60V-WS853-02	Yamaha Diagnostic System(CD-ROM) *5													

*1 V4 :115B, 115C, 130B, 140B, 140C

*2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G

*3 Electronic fuel injected model only

*4 2 stroke model

*5 Up-date CD-ROM only

APPLICATION CHART

Tool No. 90890-	4 Stroke model																			
	FT8D	F9.9B	FT9.9A	F9.9C FT9.9D F13.5A F15A	F15B	F20A F25A FT25B	F25C	F30A F40B	F50A F50D F60A	F50F F60C	FT50B FT50C FT60B	FT50G FT60D	F75A F80A F90A F100A F100B F100C	F75B F90B	F115A	FL115A	F150A	FL150A	F200A F225A	FL200A FL225A
01252	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03112	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03141	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03160	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03174	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06754	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06756	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06757													●							
06865										●		●		●	●	●	●	●	●	●
06864															●	●			●	●
06760	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06840	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06786										●		●		●	●	●	●	●	●	●
06942										●		●		●					●	●
06704	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03016	●	●	●	●	●															
06759		(●)	(●)	(●)	(●)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03006	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03007	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03008	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03009													●	●	●	●			●	●
03010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03180	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03107					●								●	●	●	●			●	●
06563													●	●	●	●	●	●	●	●
03172	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06867 (06767)								●	●	●	●	●								
06868 (06768)						●	●	●												
06857 (06757)													●							
06869 (06769)																	●	●	●	●
06870 (06770)									●		●		●						●	●
06871 (06771)																			●	●
06875 (06775)																				
06872 (06772)													●							
06879 (06779)																				
06887 (06787)																			●	●
06888 (06788)																				
06790																●	●			
06791														●	●	●	●	●		
06792										●		●		●	●	●	●	●	●	●
06793														●	●	●	●	●	●	●
06861																				
06846																	●	●		
06847																	●	●		
06848														●						
60V-85300-02										●		●		●	●	●			●	●
60V-WS853-02										●		●		●	●	●			●	●

APPLICATION CHART

ENGINE SERVICE (2 stroke model)

Tool No.	MODEL	2 Stroke model											
		2B 2C	3A	4AC 4AS 5C 5CS	6C 8C	9.9F 13.5A 15F	20C	20D 25N	25B 25X 30H	30D	40V 40Y 50H	55B	50G 60F 70B
06521	Flywheel puller	●	●	●	●	●	●	●	●	●	●	●	●
06522	Flywheel holder	●	●	●	●	●	●	●	●	●	●	●	●
06523	Bearing outer race puller Assy												
06524	Small end bearing installer												
06525	Small end bearing installer								●				
06526	Small end bearing installer							●		●			
06527	Small end bearing installer								●		●	●	●
06528	Small end bearing installer												
06843	Piston slider ø58												
06529	Piston slider ø70												
06530	Piston slider ø85											●	●
06534	Bearing separator	●	●	●	●	●	●	●	●	●	●	●	●
06540	Gear puller												
06543	Small end bearing installer					●							
06606	Driver rod LS	●	●	●	●		●			●			●
06623	Bearing outer race attachment												
06624	Bearing outer race attachment												
06626	Bearing outer race attachment												
06652	Driver rod L3												
06630	Ball bearing attachment												
06631	Ball bearing attachment												
06635	Ball bearing attachment												
06637	Ball bearing attachment												
06639	Bearing inner race attachment												●
06640	Bearing inner race attachment												
06641	Bearing inner race attachment								●		●	●	
06644	Bearing inner race attachment					●	●	●		●			
06645	Bearing inner race attachment	●	●	●	●		●						
06613	Needle bearing attachment												
06654	Needle bearing attachment												
06655	Ball bearing attachment												
06660	Bearing inner race attachment												
05158	Piston ring compressor												
06661	Bearing inner race attachment												
06662	Bearing inner race attachment												●
06663	Ball bearing attachment												
06069	Shaft holder					●							
06355	Crankshaft holder 16						●						
06552	Crankshaft holder 20												
03159	Vacuum gauge												
03094	Vacuum gauge [Selector type]												
03060	• Attachment												
06561	Crankshaft holder 12												
06562	Crankshaft holder 18												
01235	Rotor holder												
01701	Sheave holder												
04086	Universal clutch holder												
06991	Injector grease												
GENERAL TOOL													
G1	Deep socket 1 (30 x 100)												
G2	Deep socket 2 (36 x 100)												
G3	Deep socket 3 (41 x 100)												
G4	Deep socket 4 (46 x 100)												
G5	T-type TORX socket T55												
G6	E-type TORX socket E10												
G7	TORX tamper resistant driver T20												
G8	TORX tamper resistant driver T25												

*1 V4 :115B, 115C, 130B, 140B, 140C

*3 Electronic fuel injected model only

*2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G,
200H, 200J, 225D, 225G

*4 2 stroke model

APPLICATION CHART

Tool No. 90890-	2 Stroke model															
	55D 75A 75B 85A	75C 80A 90A	V4*1	L130B	V6*2	D150N	150A 175A 200A	L150J L200F L200J	L150A L200A	225C 250A (225F) (250B)	L225C L250A (L225F) (L250B)	Z150P Z150Q Z175G Z175H Z200N Z200P	LZ150P LZ200N	Z225H Z250F	Z250D Z300A Z300B	LZ250D LZ300A
06521	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06522	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06523														●	●	●
06524																
06525																
06526																
06527	●	●														
06528																
06843																
06529																
06530	●	●	(●)	(●)	(●)	(●)		(●)	(●)	(●)	(●)					
06534	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06540												●	●	●	●	●
06543																
06606	●	●	●	●	●	●	●	●	●			●	●	●	●	●
06623														●	●	●
06624												●	●	●	●	●
06626																
06652							●					●	●			
06630												●	●			
06631			●	●	●	●		●	●							
06635												●	●			
06637			●	●	●	●	●	●	●							
06639	●	●														
06640	●	●														
06641																
06644																
06645																
06613																
06654							●					●	●			
06655																
06660					●			●	●			●	●			
05158			●	●	●	●	●	●	●	●	●	●	●	●	●	●
06661							●			[●]	[●]	●	●		●	●
06662	●	●					●					●	●			
06663			●	●	●		●	●	●	●	●	●	●			
06069																
06355																
06552																
03159																
03094																
03060																
06561																
06562																
01235												●	●	●	●	●
01701												●	●	●	●	●
04086																
06991												●	●	●	●	●
G1																
G2																
G3																
G4																
G5																
G6																
G7																
G8																

APPLICATION CHART

ENGINE SERVICE

(Enduro/Kerosene model, 4 stroke model)

Tool No.	MODEL	Enduro/Kerosene model											4 Stroke model		
		E8D EK8D	E9.9D E15D EK9.9D EK15D EK9.9J EK15P EK9.9H EK15N	E25B EK25B E30H	40G** E40G EK40G	E40X 40X**	40J** K40J	E48C E55C	E60H K50E	E60J E65A E75B	E115A	F2.5A	F4A	F6A F6B F8C	
06521	Flywheel puller	●	●	●	●	●	●	●	●	●	●	●	●	●	
06522	Flywheel holder	●	●	●	●	●	●	●	●	●	●	●	●	●	
06523	Bearing outer race puller Assy														
06524	Small end bearing installer	●													
06525	Small end bearing installer														
06526	Small end bearing installer														
06527	Small end bearing installer			●	●	●	●	●	●	●					
06528	Small end bearing installer									●					
06843	Piston slider ø58										●			●	
06529	Piston slider ø70											●			
06530	Piston slider ø85							●	●	●	●				
06534	Bearing separator	●	●	●	●	●	●	●	●	●	●		●		
06540	Gear puller														
06543	Small end bearing installer		●												
06606	Driver rod LS				●	●	●		●	●	●				
06623	Bearing outer race attachment														
06624	Bearing outer race attachment														
06626	Bearing outer race attachment														
06652	Driver rod L3				●	●	●								
06630	Ball bearing attachment														
06631	Ball bearing attachment				●		●				●				
06635	Ball bearing attachment														
06637	Ball bearing attachment										●				
06639	Bearing inner race attachment				●		●		●	●					
06640	Bearing inner race attachment						●		●	●					
06641	Bearing inner race attachment				●		●	●	●						
06644	Bearing inner race attachment		●				●								
06645	Bearing inner race attachment														
06613	Needle bearing attachment					●									
06654	Needle bearing attachment				●	●	●								
06655	Ball bearing attachment					●									
06660	Bearing inner race attachment														
05158	Piston ring compressor														
06661	Bearing inner race attachment														
06662	Bearing inner race attachment							●	●						
06663	Ball bearing attachment									●					
06069	Shaft holder														
06355	Crankshaft holder 16														
06552	Crankshaft holder 20														
03159	Vacuum gauge														
03094	Vacuum gauge [Selector type]														
03060	• Attachment														
06561	Crankshaft holder 12													●	
06562	Crankshaft holder 18														
01235	Rotor holder														
01701	Sheave holder														
04086	Universal clutch holder														
06991	Injector grease														
GENERAL TOOL															
G1	Deep socket 1 (30 x 100)														
G2	Deep socket 2 (36 x 100)														
G3	Deep socket 3 (41 x 100)														
G4	Deep socket 4 (46 x 100)														
G5	T-type TORX socket T55														
G6	E-type TORX socket E10														
G7	TORX tamper resistant driver T20														
G8	TORX tamper resistant driver T25														

*1 V4 :115B, 115C, 130B, 140B, 140C

*3 Electronic fuel injected model only

*2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G,
200H, 200J, 225D, 225G

*4 2 stroke model

APPLICATION CHART

Tool No. 90890-	4 Stroke model																			
	FT8D	F9.9B	FT9.9A	F9.9C FT9.9D F13.5A F15A	F15B	F20A F25A FT25B	F25C	F30A F40B	F50A F50D F60A	F50F F60C	FT50B FT50C FT60B	FT50G FT60D	F75A F80A F90A F100A F100B F100C	F75B F90B	F115A	FL115A	F150A	FL150A	F200A F225A	FL200A FL225A
06521	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06522	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06523																				
06524																				
06525						●	●													
06526																				
06527																				
06528						●	●													
06843	●																			
06529		●	●	●	●	●	●	●	●	●	●	●								
06530													●	●	●	●				
06534		●	●	●		●		●	●		●		●	●	●	●				
06540																				
06543																				
06606		●	●		●		●	●												
06623																				
06624																				
06626							●			●		●								
06652																				
06630																				
06631																				
06635					●															
06637																				
06639																				
06640																				
06641																				
06644		●																		
06645																				
06613																				
06654																				
06655																				
06660																				
05158																	●	●	●	●
06661																				
06662																				
06663						●														
06069		●	●	●	●															
06355																				
06552													●	●	●	●				
03159								●	●		●		●	●	(●)	(●)	(●)	(●)	●	●
03094								(●)	(●)		(●)		(●)	●	●	●	●	●	(●)	(●)
03060								(●)	(●)		(●)		(●)	●	●	●	●	●	(●)	(●)
06561	●																			
06562									●	●	●	●								
01235																				
01701																				
04086							●													
06991																				
G1		●	●																	
G2				●	●															
G3								●		●										
G4													●		●	●			●	●
G5													●		●	●			●	●
G6													●		●	●				
G7															●	●			●	●
G8															●	●			●	●

APPLICATION CHART

ENGINE SERVICE

(4 stroke model)

Tool No. 90890-	MODEL	4 Stroke model											
		F2.5A	F4A	F6A F6B F8C	FT8D	F9.9B	FT9.9A	F9.9C FT9.9D F13.5A F15A	F15B	F20A FT25B	F25C	F30A F40B	F50A F50D F60A
01426	Oil filter wrench 64							●	●	●	●	●	●
06830	Oil filter wrench 72.5												
04019	Valve spring compressor	●	●	●	●	●	●	●	●	●	●	●	●
04108	Valve spring compressor attachment		●	●	●	●	●						
06320	Valve spring compressor attachment	●						●	●		●	●	●
04064	Valve guide remover/installer 5.9												
06801	Valve guide remover/installer 5.4	●	●	●	●	●	●	●	●	●	●	●	●
06810	Valve guide installer 5.5												
06802	Valve guide installer 5.4							●	●				
04015	Valve guide installer 5.6							●		●		●	●
06804	Valve guide reamer 5.5	●	●	●	●	●	●	●	●	●	●	●	●
04066	Valve guide reamer 6.02												
05041	Tap handle (5-6)		●	●	●	●	●	●	●	●	●	●	●
04101	Valve lapper		●	●	●	●	●	●	●	●	●	●	●
06316	Valve seat cutter holder ø5.5	●	●	●	●	●	●	●	●	●	●	●	●
06553	Valve seat cutter holder ø6.0												
06313	Valve seat cutter 5°-25		●	●	●	●	●	●	●				
06314	Valve seat cutter 5°-29							●	●				
06326	Valve seat cutter 30°-32.5									(●)		●	●
06327	Valve seat cutter 30°-35									●	●		
06328	Valve seat cutter 30°-27	●								●	●	●	●
06312	Valve seat cutter 45°-27.5	●	●	●	●	●	●	●	●	●	●	●	(●)
06555	Valve seat cutter 45°-30									(●)		(●)	●
06325	Valve seat cutter 45°-35									●	●	●	●
06315	Valve seat cutter 60°-26	●	●	●	●	●	●	●	●	●	●	●	●
06323	Valve seat cutter 60°-31									●	●		●
06324	Valve seat cutter 60°-36											●	

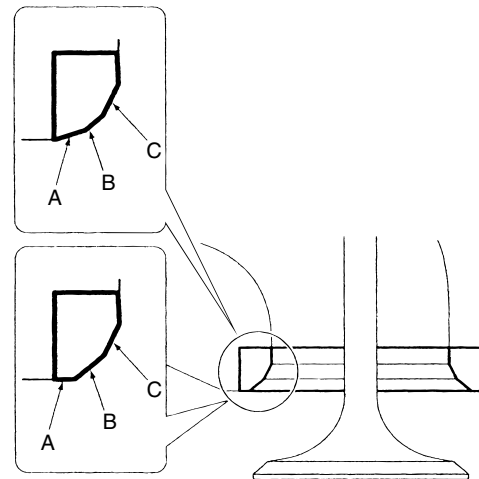
Tool No. 90890-	MODEL	4 Stroke model												
		F50F F60C	FT50B FT50C FT60B	FT50G FT60D	F75A F80A F90A F100A F100B F100C	F75B F90B	F115A	FL115A	F150A	FL150A	F200A F225A	FL200A FL225A		
01426	Oil filter wrench 64	●	●	●	●	●	●	●						
06830	Oil filter wrench 72.5													
04019	Valve spring compressor	●	●	●	●	●	●	●	●	●	●	●	●	
04108	Valve spring compressor attachment													
06320	Valve spring compressor attachment	●	●	●	●	●	●	●	●	●	●	●	●	
04064	Valve guide remover/installer 5.9					●	●	●						
06801	Valve guide remover/installer 5.4	●	●	●					●	●	●	●	●	
06810	Valve guide installer 5.5	●		●					●	●	●	●	●	
06802	Valve guide installer 5.4													
04015	Valve guide installer 5.6		●											
06804	Valve guide reamer 5.5	●	●	●					●	●	●	●	●	
04066	Valve guide reamer 6.02					●	●	●						
05041	Tap handle (5-6)	●	●	●	●	●	●	●						
04101	Valve lapper	●	●	●	●	●	●	●						
06316	Valve seat cutter holder ø5.5	●	●	●					●	●	●	●		
06553	Valve seat cutter holder ø6.0													
06313	Valve seat cutter 5°-25													
06314	Valve seat cutter 5°-29													
06326	Valve seat cutter 30°-32.5		●		●	●	●	●	●	●	●	●	●	
06327	Valve seat cutter 30°-35	●		●					●	●	●	●	●	
06328	Valve seat cutter 30°-27	●	●	●	●	●	●	●						
06312	Valve seat cutter 45°-27.5	(●)	(●)	(●)	(●)	(●)	(●)	(●)						
06555	Valve seat cutter 45°-30	●	●	●	●	●	●	●						
06325	Valve seat cutter 45°-35								●	●	●	●	●	
06315	Valve seat cutter 60°-26	●	●	●	●	●	●	●						
06323	Valve seat cutter 60°-31	●	●	●										
06324	Valve seat cutter 60°-36				●	●	●	●	●	●	●	●	●	

VALVE SEAT CUTTER (Referring)

MODEL	F2.5A						F4A/F6A F6B F8C/FT8D						F9.9A/F9.9B F9.9C/F9.9D F13.5A/F15A/F15B						F20A/F25A/FT25B F30A/F40B					
	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C
TOOL No.90890-																								
06316 (ø5.5 mm holder)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06312 (45°, ø27.5 mm)		●			●			●			●			●			●						●	
06313 (5°, ø25 mm)											●						●							
06314 (5°, ø29 mm)													●											
06315 (60°, ø26 mm)			●			●			●			●			●			●						●
06553 (ø6.0 mm holder)																								
06555 (45°, ø30 mm)																								
06323 (60°, ø31 mm)																								
06324 (60°, ø36 mm)																						●		
06325 (45°, ø35 mm)																						●		
06326 (30°, ø32.5 mm)																						●		
06327 (30°, ø35 mm) New																						●		
06328 (30°, ø27 mm)	●				●																		●	

MODEL	F25C						F50A/F60A/FT60B FT50B/FT50C/F50D						F50F/FT50G/F60C/FT60D						F75A/F75B/F80A/F90A F90B/F100A/F100B F100C/F115A/FL115A					
	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C
TOOL No.90890-																								
06316 (ø5.5 mm holder)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
06312 (45°, ø27.5 mm)					●																			
06313 (5°, ø25 mm)																								
06314 (5°, ø29 mm)																								
06315 (60°, ø26 mm)						●						●						●						●
06553 (ø6.0 mm holder)																			●	●	●	●	●	●
06555 (45°, ø30 mm)																								
06323 (60°, ø31 mm)																								
06324 (60°, ø36 mm)																								
06325 (45°, ø35 mm)																								
06326 (30°, ø32.5 mm)																								
06327 (30°, ø35 mm) New	●																							
06328 (30°, ø27 mm)																								

MODEL	F150A/F200A/FL200A FL150A/F225A/FL225A					
	In. A	In. B	In. C	Ex. A	Ex. B	Ex. C
TOOL No.90890-						
06316 (ø5.5 mm holder)	●	●	●	●	●	●
06312 (45°, ø27.5 mm)						
06313 (5°, ø25 mm)						
06314 (5°, ø29 mm)						
06315 (60°, ø26 mm)						
06553 (ø6.0 mm holder)						
06555 (45°, ø30 mm)						
06323 (60°, ø31 mm)						
06324 (60°, ø36 mm)						
06325 (45°, ø35 mm)						
06326 (30°, ø32.5 mm)						
06327 (30°, ø35 mm) New	●					
06328 (30°, ø27 mm)						



ENGINE SERVICE (Test propeller) (2 stroke model)

Tool No. 90890-	MODEL	2 Stroke model													
		2B 2C	3A	4AS 5C 5CS	6C 8C	9.9F 13.5A 15F	20C	20D 25N	25B 25X 30H	30D	40V 40Y 50H	55B	50G 60F 70B	55D 75A 75B 85A	75C 80A 90A
01601	Test propeller (646)	●													
01609	Test propeller (647)														
01611	Test propeller (663)									●	●				
01613	Test propeller (664)						●								
01618	Test propeller (676)														
01619	Test propeller (683)					●									
01620	Test propeller (688)											●	●	●	
01621	Test propeller (689)							●		●					
01624	Test propeller (6E5)														
01625	Test propeller (6G1)				●										
01626	Test propeller (6G5)														
01627	Test propeller (6G8)														
01629	Test propeller (61N)									●					
01630	Test propeller (6L5)		●	●											
01631	Test propeller (6L6)														

Tool No. 90890-	MODEL	2 Stroke model													
		V4*1	L130B	V6*2	D150N	150A 175A 200A L200A	L150F L150J L200F L200J	L150A L200A	225C 250A 225F 250B	L225C L250A L225F L250B	Z150P Z150Q Z175G Z175H Z200N Z200P	LZ150P LZ200N	Z225H Z250F	Z250D Z300A Z300B	LZ250D LZ300A
01601	Test propeller (646)														
01609	Test propeller (647)														
01611	Test propeller (663)														
01613	Test propeller (664)														
01618	Test propeller (676)														
01619	Test propeller (683)														
01620	Test propeller (688)														
01621	Test propeller (689)														
01624	Test propeller (6E5)	●													
01625	Test propeller (6G1)														
01626	Test propeller (6G5)			●		●		●							
01627	Test propeller (6G8)														
01629	Test propeller (61N)														
01630	Test propeller (6L5)														
01631	Test propeller (6L6)		●												
					NA		NA	NA		NA	NA	NA	NA	NA	NA

*1 V4 :115B, 115C, 130B, 140B, 140C

*2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G

*3 Electronic fuel injected model only

*4 2 stroke model

NA : Not availables

APPLICATION CHART

(Test propeller)

(Enduro/Kerosene model, 4 stroke model)

Tool No. 90890-	MODEL	Enduro/Kerosene model									4 Stroke model				
		E8D EK8D	E9.9D E15D EK9.9D EK15D EK9.9J EK15P EK9.9H EK15N	E25B EK25B E30H	40G**4 E40G EK40G	E40X 40X**4	40J**4 K40J	E48C E55C	E60H K50E	E60J E65A E75B	E115A	F2.5A	F4A	F6A F6B F8C	FT8D
01601	Test propeller (646)														
01609	Test propeller (647)	●													
01611	Test propeller (663)					●	●	●							
01613	Test propeller (664)														
01618	Test propeller (676)				●										
01619	Test propeller (683)		●										●		
01620	Test propeller (688)								●	●					
01621	Test propeller (689)														
01624	Test propeller (6E5)										●				
01625	Test propeller (6G1)														
01626	Test propeller (6G5)														
01627	Test propeller (6G8)														●
01629	Test propeller (61N)			●											
01630	Test propeller (6L5)										●	●			
01631	Test propeller (6L6)														

Tool No. 90890-	MODEL	4 Stroke model													
		F9.9B	FT9.9A	F9.9C FT9.9D F13.5A F15A	F15B F25C	F20A F25A FT25B	F30A F40B	F50A F50D F60A	FT50B FT50C FT60B	F50F FT50G F60C FT60D F75B F90B	F75A F80A F90A F100A F100B F100C	F115A	FL115A	F150A FL150A	F200A FL200A F225A FL225A
01601	Test propeller (646)														
01609	Test propeller (647)														
01611	Test propeller (663)							●							
01613	Test propeller (664)														
01618	Test propeller (676)														
01619	Test propeller (683)	●		●											
01620	Test propeller (688)								●						
01621	Test propeller (689)					●	●								
01624	Test propeller (6E5)										●	●			
01625	Test propeller (6G1)														
01626	Test propeller (6G5)														
01627	Test propeller (6G8)		●												
01629	Test propeller (61N)														
01630	Test propeller (6L5)														
01631	Test propeller (6L6)												●		
					NA					NA				NA	NA

APPLICATION CHART

ENGINE SERVICE

(Crankshaft disassembly and reassembly) (2 stroke model)

The tools on these pages (1-13 and 1-14) can be ordered from the Marine Service Division of Yamaha Motor Co., Ltd.

Tool No. 90890-	MODEL	Q'ty	2 stroke model											
			2B 2C	3A	4AC 4AS 5C 5CS	6C 8C	9.9F 13.5A 15F	20C	20D 25N	25B 25X 30H				
02422	Crank shaft jig set	1	●	●	●	●	●	●	●			●		
02351	• Flange	1	●	●	●	●	●	●	●			●		
02352	• Body	1	●	●	●	●	●	●	●			●		
02353	• Bolt	4	●	●	●	●	●	●	●			●		
02354	• Washer	4	●	●	●	●	●	●	●			●		
02355	• Bushing-1 (D15)	1	●											
02357	• Bushing-3 (D20)	2	●	●	●	●								
02358	• Bushing-4 (D22)	1												
02359	• Bushing-5 (D25)	2						●	●			●		
02361	• Bushing-7 (D29)	1						●						
02363	• Bushing-9 (D30)	1												
02365	• Bushing-1 (B11)	1												
02366	• Bushing-12 (D35)	1							●					
02399	• Bushing-13 (D20)	2			●									
02367	• Height ring-1 (H28)	1	●											
02369	• Height ring-3 (H40)	1			●									
02371	• Height ring-5 (H47)	1						●						
02376	• Height ring-10 (H53)	1							●					
02377	• Height ring-5 (H54)	1							●					
02379	• Height ring-13 (H57)	1										●		
02384	• Pressure plate	1	●	●	●			●	●			●		
02385	• Press body	1	●	●	●			●	●			●		
02386	• Plate A	1			●			●	●			●		
02387	• Plate B	2	●	●										
02388	• Bolt	2	●	●										
02389	• Pressure pin A	1	●	●	●	●								
02390	• Pressure pin B	1						●	●			●		
02391	• Bearing pressure A	1	●	●	●	●								
02392	• Bearing pressure B	1						●	●			●		
02393	• Bearing pressure C	1										●		
02394	• Support	2	●	●	●	●		●	●			●		
02395	• Spacer A	1	●	●										
02396	• Spacer B	1			●	●		●	●			●		
02419	• Bushing 14 (E25A/25V)	1										●		
02401	• Height ring (E40G/J)	1												
02402	• Plate C	2												
02403	• Pressure pin C	1												
02404	• Spacer C	1												
06590	• Height ring 640 (H-19)	1												
02416	Disassembling kit	1												
02407	• Nut	6												
02408	• Pressure plate	1												
02409	• Pole	3												
02410	• Plate A	1												
02411	• Plate B	1												
02417	Assembling kit	1												
02412	• Guide	3												
02413	• Guide plate	1												
02414	• Guide pole	1												
02415	• Base	1												
02418	Crank separator kit (set 02416 + 02417)	-												

Q'ty : The figure for this part indicates the quantity of the parts ordered in a set or a kit.

APPLICATION CHART

(Crankshaft disassembly and reassembly) (Enduro/Kerosene model)

Tool No. 90890-	MODEL	Q'ty	Enduro/Kerosene model											
			E8D EK8D	E9.9D E15D EK9.9D EK15D EK9.9J EK15P EK9.9H EK15N	E25B EK25B E30H	40G*1 E40G EK40G	E40X 40X*1	40J*1 K40J	E48C E55C	E60H K50E				
02422	Crank shaft jig set	1	●	●	●	●	●	●	●	●		●		
02351	• Flange	1	●	●	●	●	●	●	●	●		●		
02352	• Body	1	●	●	●	●	●	●	●	●		●		
02353	• Bolt	4	●	●	●	●	●	●	●	●		●		
02354	• Washer	4	●	●	●	●	●	●	●	●		●		
02355	• Bushing-1 (D15)	1												
02357	• Bushing-3 (D20)	2	●											
02358	• Bushing-4 (D22)	1	●											
02359	• Bushing-5 (D25)	2		●	●									
02361	• Bushing-7 (D29)	1		[●]										
02363	• Bushing-9 (D30)	1					●	●	●					
02365	• Bushing-1 (B11)	1		●										
02366	• Bushing-12 (D35)	1					●	●	●					
02399	• Bushing-13 (D20)	2												
02367	• Height ring-1 (H28)	1												
02369	• Height ring-3 (H40)	1	●											
02371	• Height ring-5 (H47)	1		●										
02376	• Height ring-10 (H53)	1												
02377	• Height ring-5 (H54)	1												
02379	• Height ring-13 (H57)	1		●	●									
02384	• Pressure plate	1	●	●	●	●	●	●	●	●				
02385	• Press body	1	●	●	●	●	●	●	●	●				
02386	• Plate A	1	●	●	●					●				
02387	• Plate B	2		●										
02388	• Bolt	2												
02389	• Pressure pin A	1	●	●										
02390	• Pressure pin B	1		[●]			●	●	●			●		
02391	• Bearing pressure A	1	●				●	●	●					
02392	• Bearing pressure B	1		●										
02393	• Bearing pressure C	1					●	●	●			●		
02394	• Support	2	●	●			●	●	●					
02395	• Spacer A	1												
02396	• Spacer B	1	●	●										
02419	• Bushing 14 (E25A/25V)	1												
02401	• Height ring (E40G/J)	1					●			●				
02402	• Plate C	2					●	●	●					
02403	• Pressure pin C	1					●	●	●			●		
02404	• Spacer C	1					●	●	●					
06590	• Height ring 640 (H-19)	1						●						
02416	Disassembling kit	1										●		
02407	• Nut	6										●		
02408	• Pressure plate	1										●		
02409	• Pole	3										●		
02410	• Plate A	1										●		
02411	• Plate B	1										●		
02417	Assembling kit	1										●		
02412	• Guide	3										●		
02413	• Guide plate	1										●		
02414	• Guide pole	1										●		
02415	• Base	1										●		
02418	Crank separator kit (set 02416 + 02417)	-										●		

*1 2 stroke model

APPLICATION CHART

LOWER UNIT SERVICE (2 stroke model)

Tool No. 90890-	MODEL	2 Stroke model												
		2B 2C	3A	4AC 4AS 5C 5CS	6C 8C	9.9F 13.5A 15F	20C	20D 25N	25B 25X 30H	30D	40V 40Y 50H	55B	50G 60F 70B	
06501	Stopper guide plate	●	●	●	●	●	●	●	●	●	●	●	●	
06502	Bearing housing puller claw L													
06503	Bearing housing puller claw M									●	●	●		
06564	Bearing housing puller claw S					●	●	●	●					
06504	Center bolt	●	●	●	●	●	●	●	●	●	●	●	●	
06509	Ring nut wrench 1						●		●					
06510	Ring nut wrench 2										●			
06511	Ring nut wrench 3												●	
06512	Ring nut wrench 4													
06513	Ring nut wrench extension						●			●		●	●	
06578	Ring nut wrench													
06715	Pinion nut holder									●	●	●	●	
06505	Pinion nut holder									(●)	(●)	(●)	(●)	
06506	• Socket adapter 1										●	●		
06507	• Socket adapter 2												●	
06508	• Socket adapter 3													
06515	Drive shaft holder 1					●								
06516	Drive shaft holder 2							●						
06517	Drive shaft holder 3						●		●	●				
06518	Drive shaft holder 4											●	●	
06519	Drive shaft holder 5													
06520	Drive shaft holder 6													
06565	Drive shaft holder 7													
06534	Bearing separator	●	●	●	●	●	●	●	●	●	●	●	●	
06521	Flywheel puller													
06523	Bearing outer race puller assembly									●	●	●	●	
06532	• Outer race puller claw A									●	●	●	●	
06533	Outer race puller claw B													
06531	Slide hammer handle											●		
06514	Puller head													
06535	Bearing puller assembly	●	●	●	●	●	●	●	●	●	●	●	●	
06536	• Bearing puller claw 1			●	●	●	●	●	●	●	●	●	●	
06537	• Bearing puller claw 2	●	●											
06538	Stopper guide stand	●	●	●	●	●	●	●	●	●	●	●	●	
06540	Gear puller													
06601	Bushing installer center bolt			●	●									
06602	Driver rod SL					●	●	●	●	●	●	●	●	
06603	Bearing depth plate					●	●	●	●	●	●	●	●	
06604	Driver rod SS					●		●	●	●	●	●	●	
06605	Driver rod LL				●	●	●	●	●	●	●	●	●	
06606	Driver rod LS	●	●	●	●	●	●		●	●	●	●	●	
06607	Needle bearing attachment													
06608	Needle bearing attachment							●						
06609	Needle bearing attachment													
06610	Needle bearing attachment													
06611	Needle bearing attachment							●					●	
06612	Needle bearing attachment												●	
06613	Needle bearing attachment					●								
06614	Needle bearing attachment					●				●	●		●	
06615	Needle bearing attachment						●	●	●					
06616	Needle bearing attachment					●	●	●						

*1 V4 :115B, 115C, 130B, 140B, 140C
 *2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G

*3 Electronic fuel injected model only
 *4 2 stroke model
 *5 Apply pressure to outer propeller shaft

APPLICATION CHART

Tool No. 90890-	2 Stroke model															
	55D 75A 75B 85A	75C 80A 90A	V4*1	L130B	V6*2	D150N	150A 175A 200A	L150F L150J L200F L200J	L150A L200A	225C 250A 225F 250B	L225C L250A L225F L250B	Z150P Z150Q Z175G Z175H Z200N Z200P	LZ150P LZ200N	Z225H Z250F	Z250D Z300A Z300B	LZ250D LZ300A
06501	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
06502	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
06503										●	●					
06564																
06504	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
06509																
06510									●	●						
06511	●	●	●	●												
06512					●		●	●	●			●	●			
06513	●	●	●	●	●		●	●	●	●	●	●	●			
06578								●			●	●				●
06715	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06505	(●)	(●)	(●)	(●)	(●)	(●)*5	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)
06506																
06507	●	●	●	●							●	●				
06508					●			●	●	●	●	●				●
06515																
06516																
06517																
06518																
06519	●	●														
06520			●	●	●	●	●	●	●	●	●	●	●	●	●	●
06565																
06534	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06521											●	●	●			
06523	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
06532	●	●	●		●	●	●	●	●	●	●	●	●		●	
06533				●	●	●		●	●	●	●	●	●			
06531				●	●	●		●	●	●	●	●	●	●	●	●
06514				●	●	●		●	●	●	●	●	●			●
06535	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
06536	●	●	●	●	●	●		●	●	●	●	●	●	●	●	
06537																
06538	●	●	●	●	●	●	●	●	●	●	●		●	●		
06540					●	●					●			●		
06601																
06602	●	●	●	●	●	●		●	●							
06603	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06604	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06605	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06606	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06607				●	●	●										
06608				●						●						
06609			●	●	●	●										
06610			●	●	●	●	●	●	●	●	●	●	●	●	●	●
06611	●	●														
06612	●	●	●	●	●	●	●	●			●	●				
06613																
06614	●	●														
06615																
06616																

APPLICATION CHART

Tool No. 90890-	MODEL	2 Stroke model												
		2B 2C	3A	4AC 4AS 5C 5CS	6C 8C	9.9F 13.5A 15F	20C	20D 25N	25B 25X 30H	30D	40V 40Y 50H	55B	50G 60F 70B	
06617	Needle bearing attachment					●								
06618	Needle bearing attachment													
06619	Bearing outer race attachment													
06620	Bearing outer race attachment													
06621	Bearing outer race attachment												●	
06622	Bearing outer race attachment								●		●	●		
06623	Bearing outer race attachment													
06624	Bearing outer race attachment									●				
06625	Bearing outer race attachment					●	●	●						
06626	Bearing outer race attachment												●	
06627	Bearing outer race attachment					●				●	●	●	●	
06628	Bearing outer race attachment				●		●		●	●	●			
06629	Ball bearing attachment													
06630	Ball bearing attachment													
06631	Ball bearing attachment													
06632	Ball bearing attachment					●								
06633	Ball bearing attachment								●					
06634	Ball bearing attachment			●	●					●		●		
06635	Ball bearing attachment													
06636	Ball bearing attachment													
06637	Ball bearing attachment		●									●		
06638	Ball bearing attachment	●		●										
06639	Bearing inner race attachment											●	●	
06640	Bearing inner race attachment					(●)					●	●		
06641	Bearing inner race attachment									●		●	●	
06642	Bearing inner race attachment									●				
06643	Bearing inner race attachment						●		●				●	
06644	Bearing inner race attachment					●	●	●	●	●		●		
06645	Bearing inner race attachment	●	●	●	●		●		●					
06646	Bushing puller center bolt			●										
06648	Bushing puller spacer			●										
06649	Bushing attachment				●	●								
06650	Bushing attachment				●									
06651	Bushing attachment			●	●									
06652	Driver rod L3			●	●	●		●	●	●	●	●	●	
06653	Needle bearing attachment													
06654	Needle bearing attachment													
06655	Ball bearing attachment													
06656	Ball bearing attachment													
06657	Ball bearing attachment													
06658	Bearing outer race attachment													
06659	Bearing inner race attachment													
06660	Bearing inner race attachment													
06661	Bearing inner race attachment													
06662	Bearing inner race attachment												●	
06052	Shift rod push arm											●	●	
YB-42223	Gland nut wrench													
YB-42224	Pinion nut wrench													

- *1 V4 :115B, 115C, 130B, 140B, 140C
- *2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G
- *3 Electronic fuel injectioned model only
- *4 2 stroke model
- *5 Apply pressure to outer propeller shaft

APPLICATION CHART

Tool No. 90890-	2 Stroke model															
	55D 75A 75B 85A	75C 80A 90A	V4*1	L130B	V6*2	D150N	150A 175A 200A	L150F L150J L200F L200J	L150A L200A	225C 250A 225F 250B	L225C L250A (L225F) (L250B)	Z150P Z150Q Z175G Z175H Z200N Z200P	LZ150P LZ200N	Z225H Z250F	Z250D Z300A Z300B	LZ250D LZ300A
06617																
06618																
06619					●	●	●	●	●	●	●					
06620			●													
06621	●	●														
06622					●	●		●	●	●	●	●		●	●	
06623					●	●		●	●	●	●					
06624					●	●	●	●	●	●	●					
06625																
06626	●	●					●									
06627	●	●														
06628														●	●	●
06629					●	●	●	●	●	●	●	●	●			
06630			●	●	●	●					[●]					
06631					●	●		●	●	●	●					
06632																
06633					●	●	●	●	●	●	●	●	●			
06634																
06635																
06636					●	●	●	●	●		●	●	●	●	●	●
06637					●	●		●	●	●	●					
06638																
06639	●	●					●									
06640	●	●									●	●	●	●	●	●
06641																
06642							●									
06643	●	●														
06644																
06645																
06646																
06648																
06649																
06650																
06651																
06652	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06653					●	●	●				●	●	●	●	●	●
06654											●	●	●			●
06655									●	●	●	●				
06656									●				●	●		
06657										●						●
06658									●	●			●	●		
06659					●	●			●				●	●		
06660					●	●	●				●	●				
06661			●		●	●	●				●					
06662	●	●			●	●	●				●					
06052	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●
YB-42223						●										
YB-42224						●										

LOWER UNIT SERVICE

(Enduro/Kerosene model, 4 stroke model)

Tool No. 90890-	MODEL	Enduro/Kerosene model										4 Stroke model		
		E8D E8DK	E9.9D E15D EK9.9D EK15D EK9.9J EK15P EK9.9H EK15N	E25B EK25B E30H	40G*4 E40G EK40G	E40X 40X*4	40J*4 K40J	E48C E55C	E60H K50E	E60J E65A E75B	E115A	F2.5A	F4A	F6A F6B F8C
06501	Stopper guide plate	●	●	●	●	●	●	●	●	●	●	●	●	●
06502	Bearing housing puller claw L									●	●			
06503	Bearing housing puller claw M		●	●	●	●	●	●	●					
06564	Bearing housing puller claw S					●								
06504	Center bolt	●	●	●	●	●	●	●	●	●	●			
06509	Ring nut wrench 1													
06510	Ring nut wrench 2				●		●	●						
06511	Ring nut wrench 3							●	●	●				
06512	Ring nut wrench 4													
06513	Ring nut wrench extension				●		●	●	●	●	●			
06578	Ring nut wrench													
06715	Pinion nut holder			●	●	●	●	●	●	●	●			
06505	Pinion nut holder			(●)		(●)	(●)	(●)	(●)	(●)	(●)			
06506	• Socket adapter 1					●	●	●						
06507	• Socket adapter 2								●	●	●			
06508	• Socket adapter 3													
06515	Drive shaft holder 1		●											
06516	Drive shaft holder 2													
06517	Drive shaft holder 3			●	●	●	●							
06518	Drive shaft holder 4							●	●					
06519	Drive shaft holder 5									●				
06520	Drive shaft holder 6										●			
06565	Drive shaft holder 7													
06534	Bearing separator	●	●	●	●	●	●	●	●	●	●			
06521	Flywheel puller					●								
06523	Bearing outer race puller assembly			●	●	●	●	●	●	●	●			
06532	• Outer race puller claw A			●		●	●	●	●	●	●			
06533	Outer race puller claw B													
06531	Slide hammer handle			●				●						●
06514	Puller head													
06535	Bearing puller assembly	●	●	●	●	●	●	●	●	●	●	●	●	●
06536	• Bearing puller claw 1	●	●	●	●	●	●	●	●	●	●	●		
06537	• Bearing puller claw 2											●		
06538	Stopper guide stand	●	●	●	●	●	●	●	●	●	●	●	●	●
06540	Gear puller													
06601	Bushing installer center bolt	●											●	
06602	Driver rod SL		●	●	●	●	●	●	●	●	●			
06603	Bearing depth plate		●	●	●	●	●	●	●	●	●			
06604	Driver rod SS		●	●	●	●	●	●	●	●	●			●
06605	Driver rod LL		●	●	●	●	●	●	●	●	●		●	
06606	Driver rod LS	●	●	●	●	●	●	●	●	●	●	●	●	●
06607	Needle bearing attachment										●			
06608	Needle bearing attachment				●	●	●							
06609	Needle bearing attachment										●			
06610	Needle bearing attachment										●			
06611	Needle bearing attachment							●	●					
06612	Needle bearing attachment							●	●	●			●	
06613	Needle bearing attachment		●		●		●					●	●	
06614	Needle bearing attachment				●	●	●	●	●			●		●
06615	Needle bearing attachment		●	●								●		
06616	Needle bearing attachment		●	●	●		●							

*1 V4 :115B, 115C, 130B, 140B, 140C

*2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G

*3 Electronic fuel injected model only

*4 2 stroke model

*5 Apply pressure to outer propeller shaft

APPLICATION CHART

Tool No. 90890-	4 Stroke model																			
	FT8D	F9.9B	FT9.9A	F9.9C FT9.9D F13.5A F15A	F15B	F20A F25A [FT25B]	F25C	F30A F40B	F50A F50D F60A	F50F F60C	FT50B FT50C [FT60B]	FT50G [FT60D]	F75A F80A F90A F100A F100B F100C	F75B F90B	F115A	FL115A	F150A	FL150A	F200A F225A	FL200A FL225A
06501	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06502											●	●	●	●	●	●	●	●	●	●
06503																				
06564	●	●	●	●	●		●			●										
06504	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06509																				
06510																				
06511											●	●	●	●	●	●				
06512																	●	●		
06513											●	●	●	●	●	●	●	●		
06578																		●		
06715						●		●	●	●	●	●	●	●	●	●	●	●	●	●
06505						(●)		(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)
06506								●	●	●										
06507								●			●	●	●	●	●	●				
06508																			●	●
06515		●	●	●	●															
06516																				
06517						●	●	●												
06518									●	●	●	●								
06519													●	●	●	●				
06520																	●	●	●	●
06565	●																			
06534	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
06521																●			●	●
06523						●			●	●	●	●	●	●	●	●	●	●	●	●
06532						●			●	●	●	●	●	●	●	●			●	●
06533																				
06531						●		●								●	●		●	●
06514																●	●		●	●
06535	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06536		●	●			(●)	●	●	●	●	●	●	●	●	●	●			●	●
06537																				
06538	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06540																				
06601																				
06602	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●				
06603	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06604	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●
06605		●	●	●	●	●	●		●	●	●	●		●	●	●	●	●	●	●
06606	●	●	●	●	●	●	●		●	●	●	●		●	●	●	●	●	●	●
06607									●			●		●	●	●				
06608									●						●	●				
06609																				
06610											●	●			●	●	●	●	●	●
06611								●	●		●	●	●	●						
06612											●	●	●	●	●	●	●	●		
06613	●			●	●															
06614	●			●		(●)		●	●	●	(●)	(●)		●						
06615						●	●													
06616	●	●		●	●															

APPLICATION CHART

Tool No. 90890-	MODEL	Enduro/Kerosene model										4 Stroke model			
		E8D E8DK	E9.9D E15D EK9.9D EK15D EK9.9J EK15P EK9.9H EK15N	E25B EK25B E30H	40G*4 E40G EK40G	E40X 40X*4	40J*4 K40J	E48C E55C	E60H K50E	E60J E65A E75B	E115A	F2.5A	F4A	F6A F6B F8C	
06617	Needle bearing attachment		●										●		●
06618	Needle bearing attachment														
06619	Bearing outer race attachment														
06620	Bearing outer race attachment														
06621	Bearing outer race attachment								●	●					
06622	Bearing outer race attachment				●	●	●	●							
06623	Bearing outer race attachment														
06624	Bearing outer race attachment												●		
06625	Bearing outer race attachment		●	●											
06626	Bearing outer race attachment								●	●					
06627	Bearing outer race attachment		●			●	●	●	●	●					
06628	Bearing outer race attachment			●											
06629	Ball bearing attachment														
06630	Ball bearing attachment											●			
06631	Ball bearing attachment				●		●								
06632	Ball bearing attachment	●												●	
06633	Ball bearing attachment	●										●			
06634	Ball bearing attachment				●		●	●						●	●
06635	Ball bearing attachment			●										●	
06636	Ball bearing attachment														
06637	Ball bearing attachment			●	●	●	●	●							
06638	Ball bearing attachment												●		
06639	Bearing inner race attachment				●	●	●	●	●	●					
06640	Bearing inner race attachment		(●)		●	●	●	●	●	●					
06641	Bearing inner race attachment				●	●	●	●	●						
06642	Bearing inner race attachment	●													
06643	Bearing inner race attachment			●					●	●					
06644	Bearing inner race attachment		●	●	●	●	●	●							
06645	Bearing inner race attachment			●											
06646	Bushing puller center bolt													●	
06648	Bushing puller spacer													●	
06649	Bushing attachment		●										●	●	●
06650	Bushing attachment	●											●		●
06651	Bushing attachment													●	
06652	Driver rod L3	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06653	Needle bearing attachment				●		●								●
06654	Needle bearing attachment														
06655	Ball bearing attachment														
06656	Ball bearing attachment														
06657	Ball bearing attachment														
06658	Bearing outer race attachment														
06659	Bearing inner race attachment					●									
06660	Bearing inner race attachment														
06661	Bearing inner race attachment											●			●
06662	Bearing inner race attachment								●	●	●				
06052	Shift rod push arm							●	●	●	●				
YB-42223	Gland nut wrench														
YB-42224	Pinion nut wrench														

- *1 V4 :115B, 115C, 130B, 140B, 140C
- *2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G
- *3 Electronic fuel injected model only
- *4 2 stroke model
- *5 Apply pressure to outer propeller shaft

APPLICATION CHART

Tool No. 90890-	4 Stroke model																				
	FT8D	F9.9B	FT9.9A	F9.9C FT9.9D F13.5A F15A	F15B	F20A F25A	F25C	FT25B F30A F40B	F50A F50D F60A	F50F F60C	FT50B FT50C FT60B	FT50G FT60D	F75A F80A F90A F100A F100B F100C	F75B F90B	F115A	FL115A	F150A	FL150A	F200A F225A	FL200A FL225A	
06617	●	●		●	●																
06618			●																		
06619																		●	●		
06620															●						
06621											●	●	●	●							
06622								●	●	●										●	●
06623						●															
06624																					
06625		●	●	●	●		●					●		●							
06626											●		●	●							
06627					●			●	●	●											
06628							●							●						●	●
06629																		●	●		
06630															●						
06631																					
06632	●	●	●	●	●																
06633													●					●	●		
06634																					
06635						●	●														
06636															●	●	●	●	●	●	●
06637						●	●	●		●											
06638														●							
06639									●	●	●	●	●	●				●	●		
06640							●	●													
06641							●	●	●												
06642														●				●	●		
06643						●	●				●	●	●								
06644	●	●		●	●		●	●	●	●											
06645																					
06646																					
06648																					
06649	●	●		●	●																
06650																					
06651																					
06652	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06653								●	●					●	●	●	●	●	●	●	●
06654																				●	●
06655											●	●		●							
06656															●	●				●	●
06657																				●	●
06658																				●	●
06659						●		●												●	●
06660																		●	●		
06661											●	●		●	●		●	●			
06662											●						●	●			
06052								●	●	●	●	●	●	●	●		●	●			
YB-42223																					
YB-42224																					

SHIM SELECTION / PTT TOOL (2 stroke model)

Tool No. 90890-	MODEL	2 Stroke model											
		2B 2C	3A	4AC 4AS 5C 5CS	6C 8C	9.9F 13.5A 15F	20C	20D 25N	25B 25X 30H	30D	40V 40Y 50H	55B	50G 60F 70B
SHIM SELECTION													
06701	Shimming plate					●	●	●	●	●	●	●	●
06710	Pinion height gauge						●		●	●	●	●	●
06711	• Pinion height gauge plate A												
06712	Pinion height gauge plate B						●		●	●	●	●	●
06703	Pinion height plate												●
06704	Digital caliper				●	●	●	●	●	●	●	●	●
06844	Magnet base		●	●	●	●	●	●	●	●	●	●	●
06706	Backlash indicator		●	●	●	●	●	●	●	●	●	●	●
07003	Magnet base plate		●	●	●	●	●	●	●	●	●	●	●
01252	Dial gauge set		●	●	●	●	●	●	●	●	●	●	●
PTT TOOL													
06568	Cylinder-end screw wrench										●	●	●
(06544)	Cylinder-end screw wrench										(●)	(●)	(●)
06587	Trim & tilt wrench										●	●	●
(06548)	Trim & tilt wrench										(●)	(●)	(●)
06588	PTT wrench 46												
06773	Up relief fitting												
06774	Down relief fitting												
06776	Hydraulic pressure gauge												
06560	Power tilt wrench												
06580	PTT oil pressure gauge assembly												
06581	PTT oil pressure gauge adapter												
06569	Title rod wrench												
06572	PTT piston vice attachment												

*1 V4 :115B, 115C, 130B, 140B, 140C

*2 V6 :150F, 150G, 150J, 150L, 175D, 200F, 200G, 200H, 200J, 225D, 225G

APPLICATION CHART

Tool No. 90890-	2 Stroke model															
	55D 75A 75B 85A	75C 80A 90A	V4*1	L130B	V6*2	D150N	150A 175A 200A	L150F L150J L200F L200J	L150A L200A	225C 250A 225F 250B	L225C L250A L225F L250B	Z150P Z150Q Z175G Z175H Z200N Z200P	LZ150P LZ200N	Z225H Z250F	Z250D Z300A Z300B	LZ250D LZ300A
06701	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06710	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06711			●	●	●	●	●	●	●	●	●	●	●	●	●	●
06712	●	●														
06703																
06704	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06844	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06706	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
07003	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
01252	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06568	●	●								●	●			●	●	●
(06544)	(●)	(●)								(●)	(●)			(●)	(●)	(●)
06587	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
(06548)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)
06588																
06773			●	●	●	●	●	●			●	●	●			
06774			●	●	●	●	●	●			●	●	●			
06776			●	●	●	●	●	●			●	●	●			
06560																
06580															●	●
06581																
06569															●	●
06572															●	●

SHIM SELECTION / PTT TOOL
(Enduro/Kerosene model, 4 stroke model)

Tool No. 90890-	MODEL	Enduro/Kerosene model										4 Stroke model		
		E8D E8DK	E9.9D E15D EK9.9D EK15D EK9.9J EK15P EK9.9H EK15N	E25B EK25B E30H	40G*1 E40G EK40G	E40X 40X*1	40J*1 K40J	E48C E55C	E60H K50E	E60J E65A E75B	E115A	F2.5A	F4A	F6A F6B F8C
SHIM SELECTION														
06701	Shimming plate		●	●	●	●	●	●	●	●	●	●		
06710	Pinion height gauge			●	●	●	●	●	●	●	●	●		
06711	• Pinion height gauge plate A											●		
06712	Pinion height gauge plate B			●	●	●	●	●	●	●				
06703	Pinion height plate				●		●							
06704	Digital caliper	●	●	●	●	●	●	●	●	●	●			
06844	Magnet base	●	●	●	●	●	●	●	●	●	●			●
06706	Backlash indicator	●	●	●	●	●	●	●	●	●	●			●
07003	Magnet base plate	●	●	●	●	●	●	●	●	●	●			●
01252	Dial gauge set	●	●	●	●	●	●	●	●	●	●			
PTT TOOL														
06568	Cylinder-end screw wrench					●								
(06544)	Cylinder-end screw wrench					(●)								
06587	Trim & tilt wrench										●			
(06548)	Trim & tilt wrench										(●)			
06588	PTT wrench 46													
06773	Up relief fitting													
06774	Down relief fitting													
06776	Hydraulic pressure gauge													
06560	Power tilt wrench													
06580	PTT oil pressure gauge assembly													
06581	PTT oil pressure gauge adapter													
06569	Title rod wrench													
06572	PTT piston vice attachment													

*1 2 stroke model

APPLICATION CHART

Tool No. 90890-	4 Stroke model																			
	FT8D	F9.9B	FT9.9A	F9.9C FT9.9D F13.5A F15A	F15B	F20A F25A FT25B	F25C	F30A F40B	F50A F50D F60A	F50F F60C	FT50B FT50C [FT60B]	FT50G [FT60D]	F75A F80A F90A F100A F100B F100C	F75B F90B	F115A	FL115A	F150A	FL150A	F200A F225A	FL200A FL225A
06701	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06710						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06711													●		●	●	●	●	●	●
06712						●	●	●	●	●	●									
06703																				●
06704	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●
06844	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06706	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
07003		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
01252		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
06568					●		●	●	●	●	●	●	●	●					●	●
(06544)					(●)		(●)	(●)	(●)	(●)	(●)	(●)	(●)	(●)					(●)	(●)
06587								●		●				●	●	●	●			
(06548)								(●)		(●)				(●)	(●)	(●)	(●)			
06588									●	[●]	[●]									
06773														●	●	●	●			
06774														●	●	●	●			
06776														●	●	●	●			
06560	●			●																
06580																			●	●
06581																●	●	●	●	
06569																		●	●	
06572																		●	●	

WATERCRAFT TOOL

MEASURING TOOL/PEAK VOLTAGE MEASUREMENT

ENGINE SERVICE

Tool No. 90890-	MODEL Tool name	FX700	SJ700A	WB700A	WB760	WB800	WVT700B	XL700	XL760	XL800	XL800A
		MEASURING TOOL/PEAK VOLTAGE MEASUREMENT									
01252	Dial gauge set	●	●	●	●	●	●	●	●	●	●
06585	Dial gauge stand set										
06584	• Dial gauge needle 173										
06583	• Dial gauge stand 173										
03006	Outside micrometer 0 - 25	●	●	●	●	●	●	●	●	●	●
03007	Outside micrometer 25 - 50	●	●	●	●	●	●	●	●	●	●
03008	Outside micrometer 50 - 75	●	●	●	●	●	●	●	●	●	●
03009	Outside micrometer 75 - 100	●	●	●	●	●	●	●	●	●	●
03010	Inside micrometer 5 - 25	●	●	●	●	●	●	●	●	●	●
06759	Cylinder gauge 50 - 100	●	●	●	●	●	●	●	●	●	●
03180	Thickness gauge	●	●	●	●	●	●	●	●	●	●
03112	Pocket tester	●	●	●	●	●	●	●	●	●	●
03174	Digital circuit tester	●	●	●	●	●	●	●	●	●	●
03160	Compression gauge	●	●	●	●	●	●	●	●	●	●
06582	Compression gauge extension M10										
06786	Fuel pressure gauge										
06842	Fuel pressure gauge adapter										
06754	Ignition tester	●	●	●	●	●	●	●	●	●	●
06756	Vacuum/ pressure pump gauge set										
06760	Digital tachometer	●	●	●	●	●	●	●	●	●	●
03172	Peak voltage adapter B	●	●	●	●	●	●	●	●	●	●
06769	Test harness EJ-II-3										
06867 (06767)	Test harness FWY-2										
06871 (06771)	Test harness FWY-4										
06877 (06777)	Test harness HM090-3										
06878 (06778)	Test harness 090-4										
06879 (06779)	Test harness FWY-8				●	●		●	●	●	●
06880 (06780)	Test harness SMT618-6										
06870 (06770)	Test harness SMT250-3										
06790	Test harness FSW-6										
06791	Test harness FWY-3-L										
06792	Test harness SMHW090-2										
06793	Test harness SMHW090-3										
06848	Test harness FSW-6A										
06849	Test harness SM6195021-6										
06862	Test connector FMY-8										
01080	Rotor puller										
60V-85300-02	Yamaha Diagnostic System (KIT)										
60V-WS853-02	Yamaha Diagnostic System (CD-ROM) *2										
ENGINE SERVICE											
06521	Flywheel puller	●	●	●	●	●	●		●	●	●
06522	Flywheel holder	●	●	●			●				
06550	Flywheel holder				●	●			●	●	●
06534	Bearing separator	●	●	●	●		●		●		
06425	Coupler wrench	●	●	●			●	●			
06546	Coupler wrench				●				●		
06551	Coupler wrench					●				●	●
06606	Driver rod LS	●	●	●	●	●	●		●		
06624	Bearing outer race attachment										
06626	Bearing outer race attachment	●	●	●	●		●				

*1 Available separately (set 06585=06584+06583)

*2 Up-date CD-ROM only

APPLICATION CHART

Tool No. 90890-	XLT800	XL1200	XL1200Ltd	XLT1200	GP760	GP800	GP800R	GP1200	GP1200R	GP1300R	EXT1200	EXS1200	SUV1200	SUV1200Z	FX140/ Cruiser	FX160/ Cruiser
01252	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06585															●	●
06584															●*1	●*1
06583															●*1	●*1
03006	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03007	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03008	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03009	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
03010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06759	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03180	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
03112	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03174	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03160	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06582															●	●
06786										●					●	●
06842										●					●	●
06754	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06756										●						●
06760	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03172	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06769		●						●		●			●	●	●	●
06867 (06767)																●
06871 (06771)		●						●					●	●		
06877 (06777)		●						●							●	●
06878 (06778)		●						●								
06879 (06779)	●				●	●	●									
06880 (06780)			●	●					●							
06870 (06770)										●					●	●
06790															●	
06791															●	
06792															●	
06793															●	●
06848										●						●
06849										●						
06862															●	●
01080															●	●
60V-85300-02															●	●
60V-WS853-02															●	●
06521	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
06522										●						
06550	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
06534		●			●			●		●	●	●				
06425										●	●	●				
06546		●			●			●		●	●	●				
06551	●		●	●		●	●		●	●			●	●		●
06606		●	●	●	●			●		●	●	●	●	●		●
06624																●
06626					●			●		●	●	●	●	●		

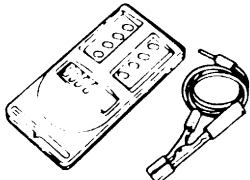

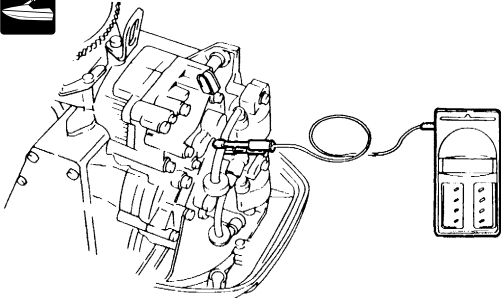
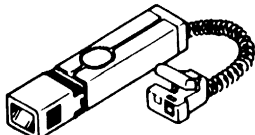

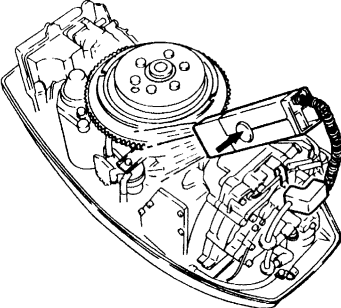
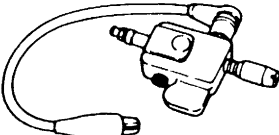

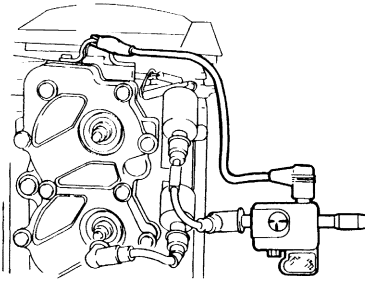
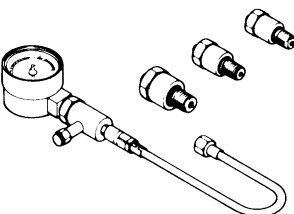

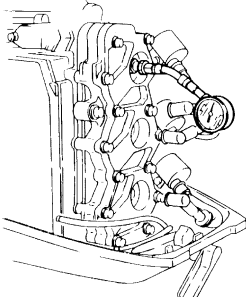
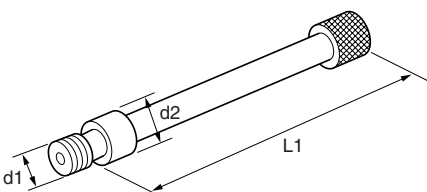


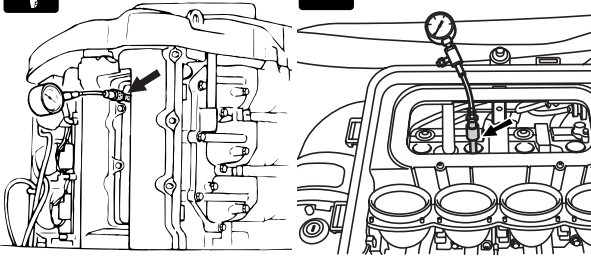
ENGINE SERVICE/JET PUMP SERVICE

Tool No. 90890-	MODEL Tool name	FX700	SJ700A	WB700A	WB760	WB800	WVT700B	XL700	XL760	XL800	XL800A
		ENGINE SERVICE									
01426	Oil filter wrench 64										
01701	Sheave holder										
01235	Rotor holder										
03094	Vacuum gauge [Selector type]										
03060	• Attachment										
06586	Shaft holder										
06756	Vacuum/pressure pump gauge set										
04019	Valve spring compressor										
04108	Valve spring compressor attachment										
04114	Valve spring compressor attachment										
04111	Valve guide remover 4.0										
04116	Valve guide remover 4.5										
04112	Valve guide installer 4.0										
04117	Valve guide installer 4.5										
04113	Valve guide reamer 4.0										
04118	Valve guide reamer 4.5										
06811	Valve seat cutter holder ø 4.0										
06812	Valve seat cutter holder ø 4.5										
06328	Valve seat cutter 30°-27										
06815	Valve seat cutter 30°-24										
06312	Valve seat cutter 45°-27.5										
06814	Valve seat cutter 45°-24										
06315	Valve seat cutter 60°-26										
06813	Valve seat cutter 60°-22										
05158	Piston ring compressor										
JET PUMP SERVICE											
06069	Shaft holder	●	●	●	●	●	●	●	●		
06552	Crankshaft holder 20									●	●
06518	Drive shaft holder 4	●	●	●	●	●	●	●	●		
06519	Drive shaft holder 5									●	●
06425	Coupler wrench	●	●	●			●	●			
06546	Coupler wrench							●			
06551	Coupler wrench					●				●	●
06523	Bearing outer race puller assembly	●		●	●	●	●	●	●	●	
06531	Slide hammer handle	●	●	●	●	●	●	●	●	●	●
06602	Driver rod SL					●		●	●		
06605	Driver rod LL					●	●	●	●		
06606	Driver rod LS	●	●	●	●	●	●	●	●	●	●
06652	Driver rod L3						●			●	●
06653	Needle bearing attachment									●	●
06611	Needle bearing attachment					●		●	●	●	●
06613	Needle bearing attachment						●				
06614	Needle bearing attachment										
06631	Ball bearing attachment										
06634	Ball bearing attachment	●	●	●	●	●	●	●	●	●	●
06638	Ball bearing attachment					●	●	●	●		
06636	Ball bearing attachment					●		●	●		
06657	Ball bearing attachment										
06625	Bearing outer race attachment					●		●	●		
06626	Bearing outer race attachment	●	●	●	●		●			●	●
06662	Bearing inner race attachment	●	●	●	●		●	●	●		
06501	Stopper guide plate									●	●
06535	Bearing puller assembly									●	●
06538	Stopper guide stand									●	●
06536	Bearing puller crow 1									●	●
06704	Digital caliper	●	●	●	●	●	●	●	●	●	●

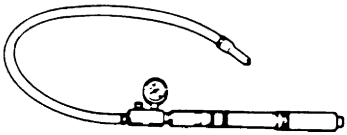

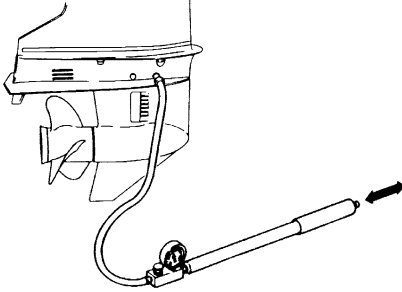
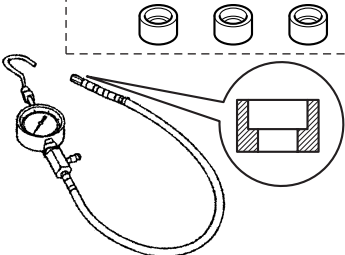


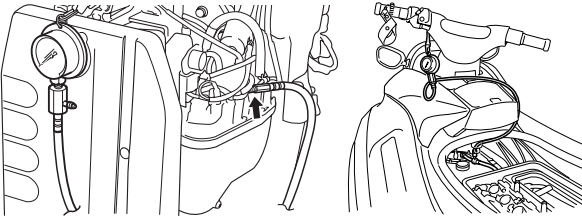
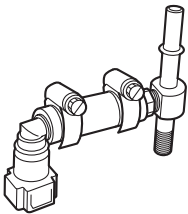

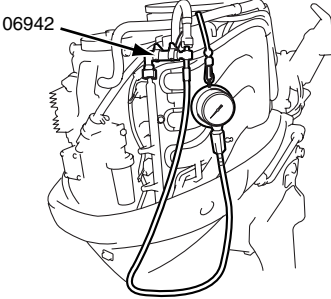
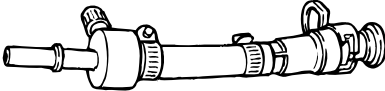

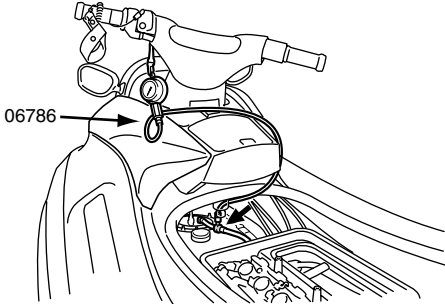
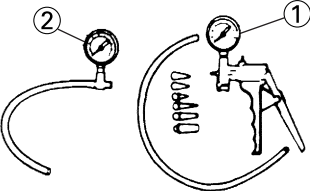

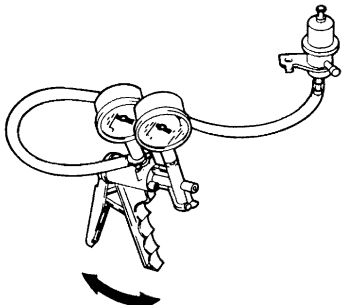
APPLICATION CHART

Tool No. 90890-	XLT800	XL1200	XL1200Ld	XLT1200	GP760	GP800	GP800R	GP1200	GP1200R	GP1300R	EXT1200	EXS1200	SUV1200	SUV1200Z	FX140/ Cruiser	FX160/ Cruiser
01426															●	●
01701															●	●
01235															●	●
03094															●	●
03060															●	●
06586															●	●
06756															●	●
04019															●	●
04108															●	●
04114															●	●
04111															●	●
04116															●	●
04112															●	●
04117															●	●
04113															●	●
04118															●	●
06811															●	●
06812															●	●
06328															●	●
06815															●	●
06312															●	●
06814															●	●
06315															●	●
06813															●	●
05158															●	●
06069		●			●	●	●	●			●	●				
06552	●		●	●					●	●			●	●	●	●
06518		●			●	●		●			●	●				
06519	●		●	●			●		●	●			●	●	●	●
06425																
06546		●			●			●			●	●				
06551	●		●	●		●			●				●	●	●	●
06523		●	●		●	●		●			●	●	●	●		
06531		●	●		●	●		●			●	●	●	●		
06602		●	●		●	●		●					●	●		
06605		●	●		●			●			●	●	●	●		
06606	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
06652	●		●	●		●	●		●	●	●	●			●	●
06653	●		●	●			●		●	●					●	●
06611		●			●	●		●								
06613											●	●	●	●		
06614	●		●	●			●		●						●	●
06631																●
06634	●	●	●	●	●	●	●	●	●	●	●	●			●	
06638		●			●	●		●			●	●	●	●		
06636		●				●							●	●		
06657																●
06625		●				●										
06626	●		●	●	●		●	●	●	●	●	●	●	●	●	●
06662		●	●								●	●	●	●		
06501	●		●	●			●		●	●					●	●
06535	●		●	●			●		●	●					●	●
06538	●		●	●			●		●	●					●	●
06536	●		●	●			●		●	●					●	●
06704	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

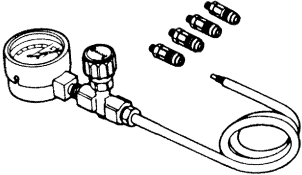

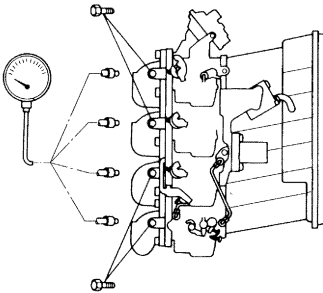
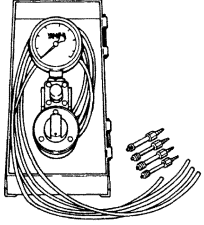
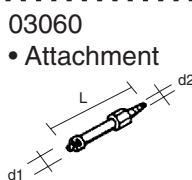

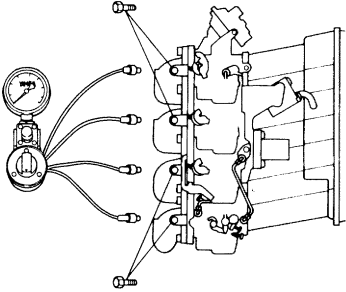
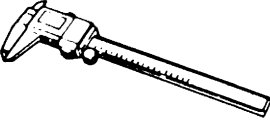

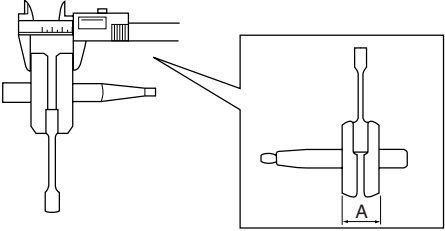
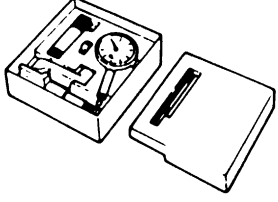


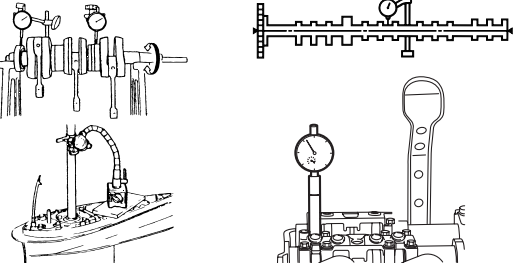
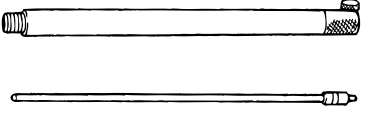

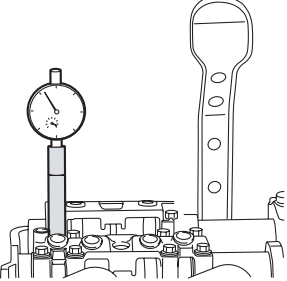
MEASURING TOOL

Tool No. 90890-	Tool name	Usage	Note
06760	Digital tachometer 	 	
03141	Timing light 	 	
06754	Ignition tester (Spark gap tester) 	 	
03160	Compression gauge 	 	Plug type: B, C & D 0—1500 kPa
06563 06582	Compression gauge extension M14 Compression gauge extension M10 	  	06563 d1:M14S d2:19 L1:135 06582 d1:M10S d2:14 L1:165

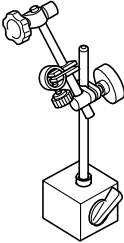

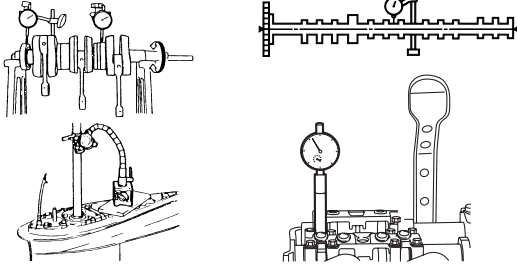
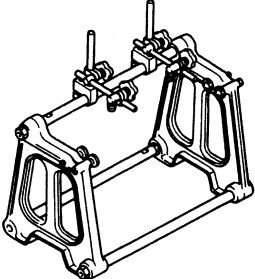

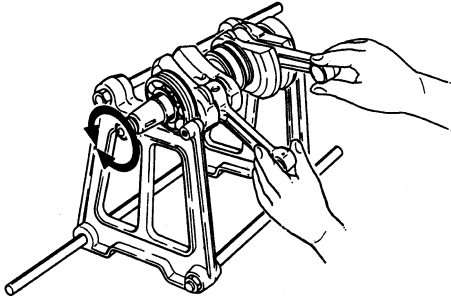
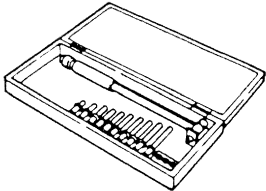

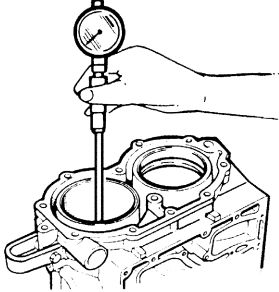
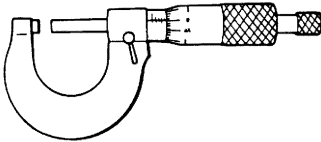

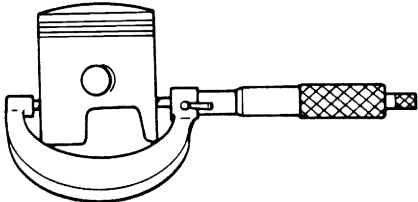
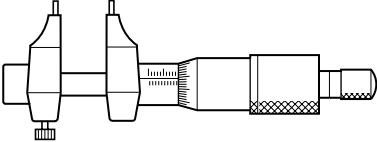

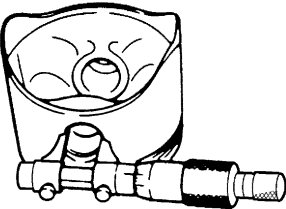
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note
06840	Leakage tester 	 	0—250 kPa
06786	Fuel pressure gauge 06785 • Mouth feel rubber 	  	0—600 kPa 06785 Q ty=3pcs/pack
06942	Fuel pressure gauge adapter B 	 	use with 06786
06842	Fuel pressure gauge adapter 	 	use with 06786
06756	Vacuum/pressure pump gauge set 	 	① Vacuum 0—(-100) kPa ② Pressure 0—50 kPa

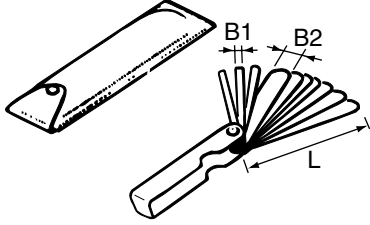

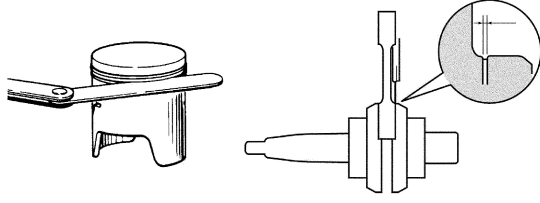
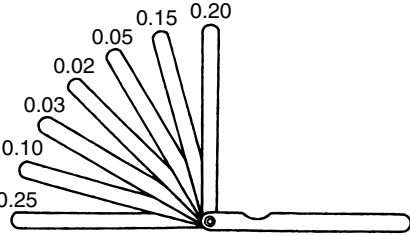

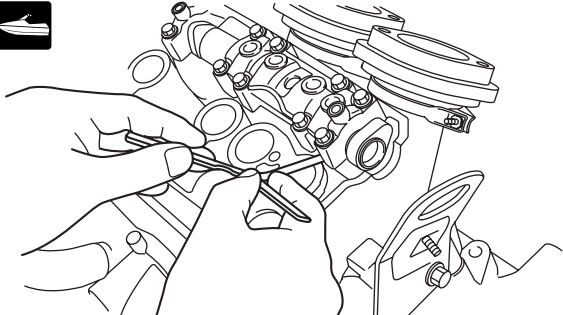
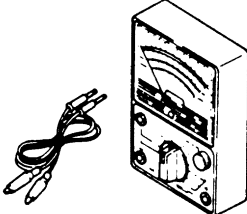

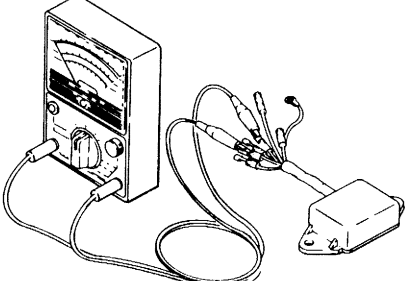
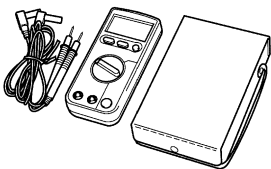

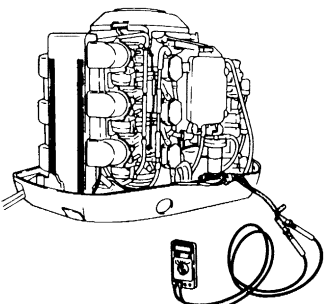
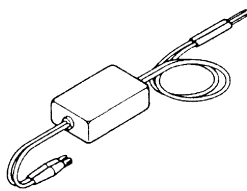

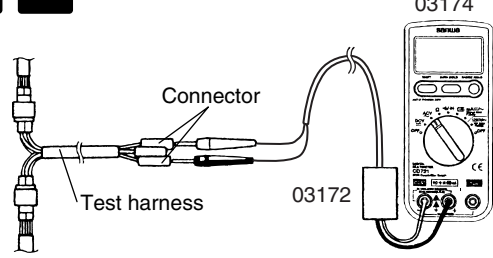
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note
03159	Vacuum gauge 	 	0—760 mmHg
03094	Vacuum gauge [Selector type]  03060 • Attachment 	 	0—(-100) kPa Selector type 03060 (1 pc) d1: M6 d2: 4 L: 42
06704	Digital caliper 	 	0—150 mm
01252	Dial gauge set 	  	
06585	Dial gauge stand set  06583 • Dial gauge stand 173 06584 • Dial gauge needle 173	 	L: 173 L: 173

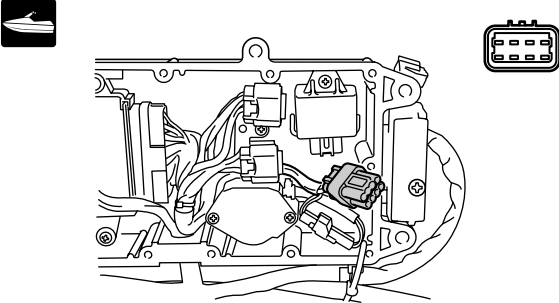
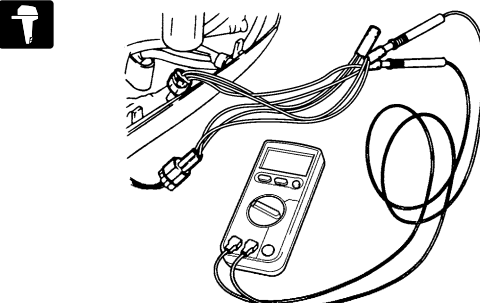
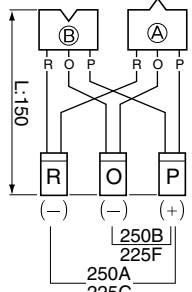
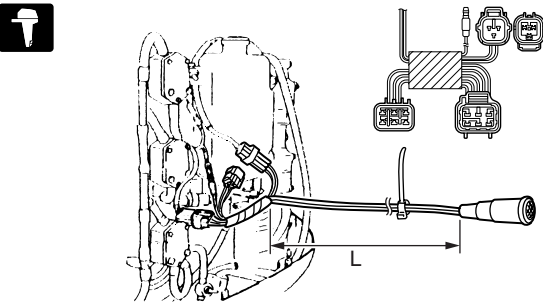
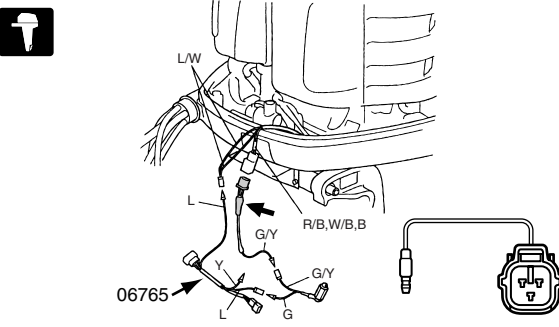





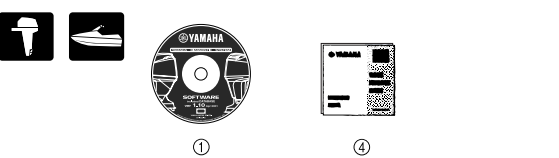
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note
06844	Magnet base B 	 	
03107	Crankshaft aligner 	 	
03016 06759	Cylinder gauge 35 - 60 Cylinder gauge 50 - 100 	 	03016 35—60 mm 06759 50—100 mm Use with dial gauge 01252
03006 03007 03008 03009	Outside micrometer 0-25 Outside micrometer 25-50 Outside micrometer 50-75 Outside micrometer 75-100 	 	03006 0—25 mm 03007 25—50 mm 03008 50—75 mm 03009 75—100 mm
03010	Inside micrometer 5 - 25 	 	5—25 mm

TOOL DESCRIPTION





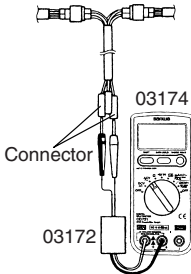
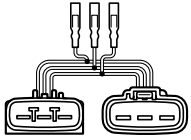
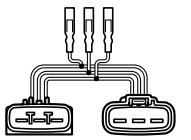
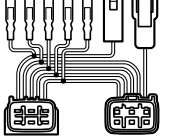





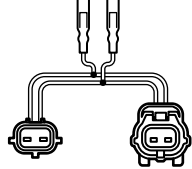
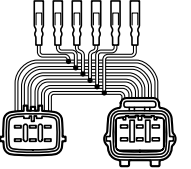
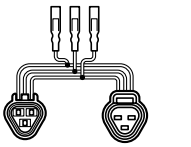
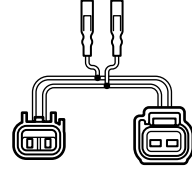







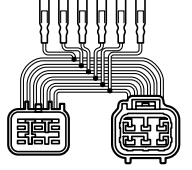
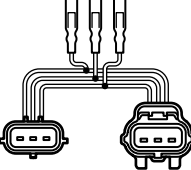
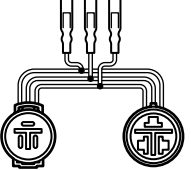
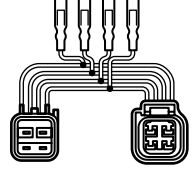





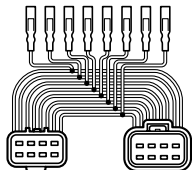
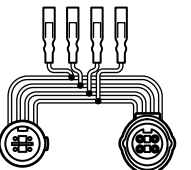
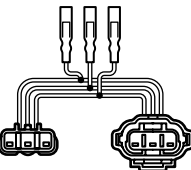
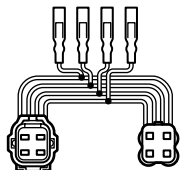





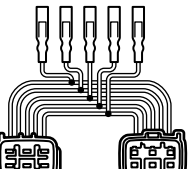
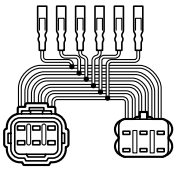
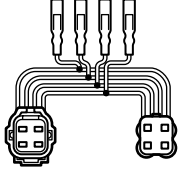
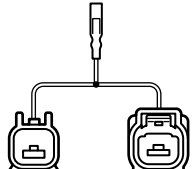







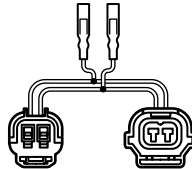
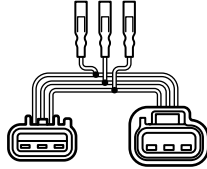
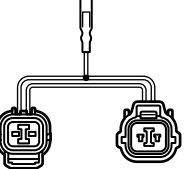
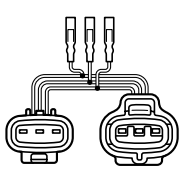
Tool No. 90890-	Tool name	Usage	Note
03180	Thickness gauge (Feeler gauge) 	 	0.03, 0.05, 0.10 0.15, 0.20, 0.25 0.30, 0.35, 0.40 0.50 L: 75 B1: 6.0 B2: 12.7
01399	Special thickness gauge 	 	
03112	Pocket tester 	 	
03174	Digital circuit tester 	 	
03172	Peak voltage adapter B 	 	

TOOL DESCRIPTION

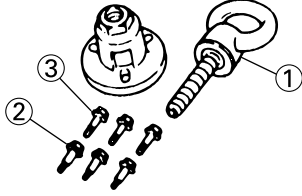
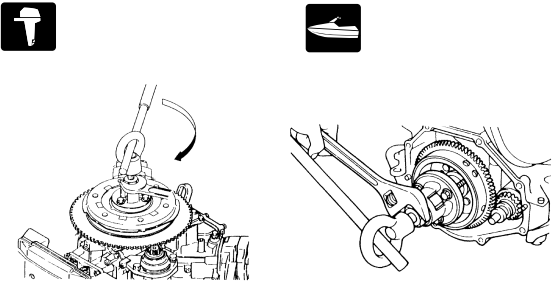
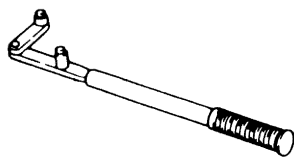
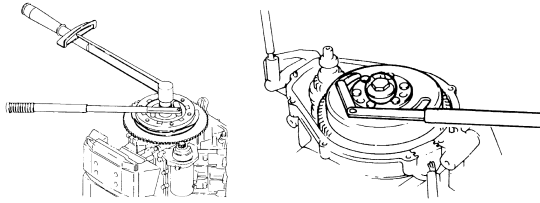
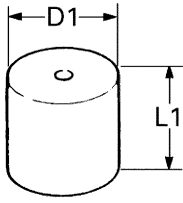
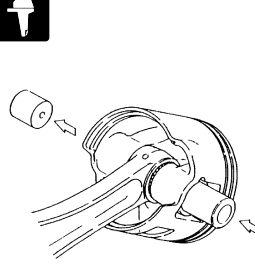
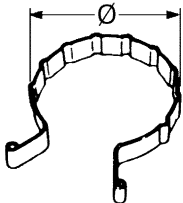
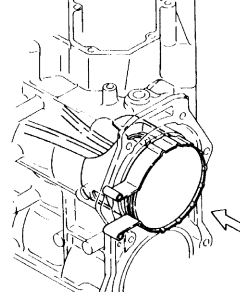
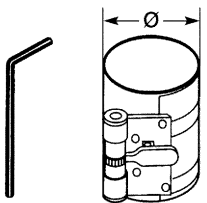
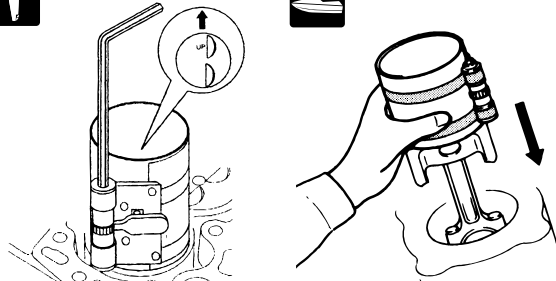
Tool No. 90890-	Tool name	Usage	Note
06862	Test connector FMY-8		
06757	Throttle sensor adjusting lead FWY-3		
06865	Diagnostic flash indicator B		L:3 m for 2 & 4 stroke Replaces 06765 (previous tool for 2 stroke) 06765 → 06865
06864	Diagnostic flash adapter		for 4 stroke model with 06765 (previous tool for 2 stroke)
60V-85300-02	  Yamaha Diagnostic System (KIT)		Contents 1. Software 2. Adapter 3. Communication cable (USB)
60V-WS853-02 *1	  Yamaha Diagnostic System (CD-ROM)		4. Instruction Manual

*1 Up-date CD-ROM only

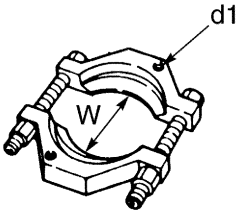
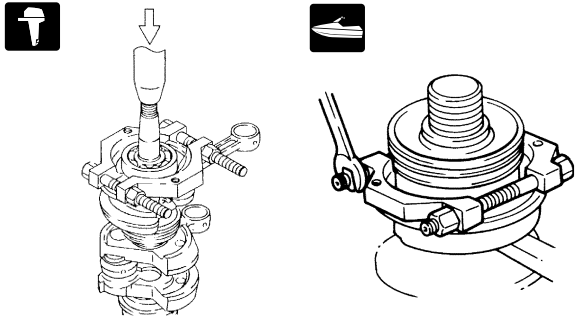
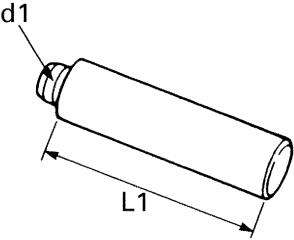
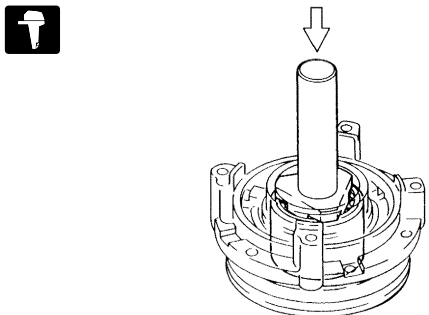
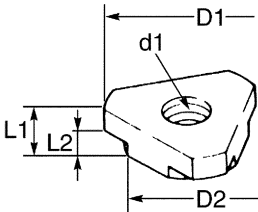
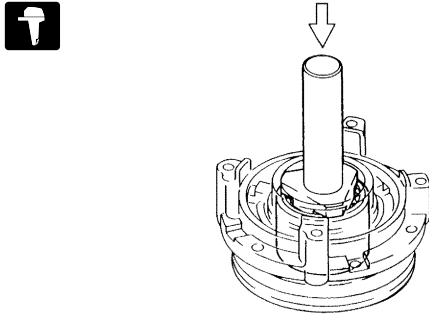
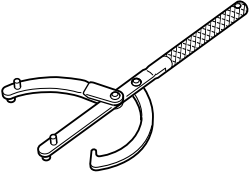
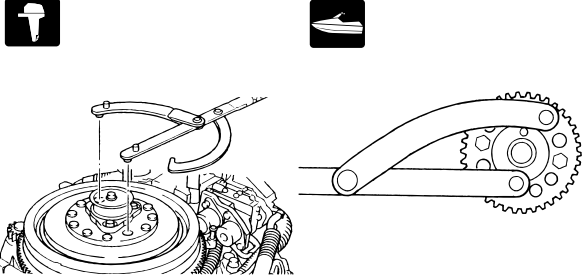
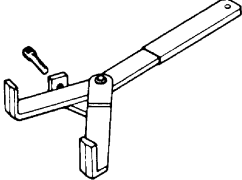
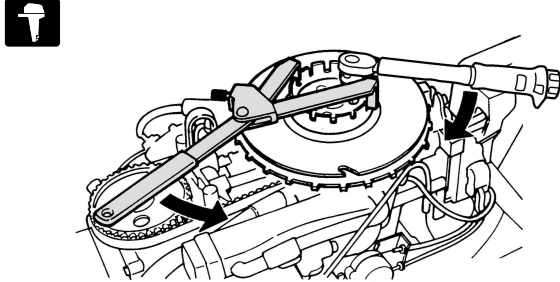
PEAK VOLTAGE MEASUREMENT

Tool No.	Tool name			Usage			
90890-							
06846 	Test harness QLW-3	06847 	Test harness QLWD-3	06848  			
							
06849 	Test harness SM6195021-6	06857 	Throttle sensor adjusting lead FWY-3	06867  	06868 	Test harness (06768) EJ-II-2	
							
06869  	Test harness (06769) EJ-II-3	06870  	Test harness (06770) SMT250-3	06871  	06872 	Test harness (06772) FWY-6	
							
06875 	Test harness (06775) AMP-4	06877 	Test harness (06777) HM090-3	06878 	06879  	Test harness (06779) FWY-8	
							
06880 	Test harness (06780) SMT618-6	06887 	Test harness (06787) FW13613-2	06888 	06790  	Test harness FSW-6	
							
06791  	Test harness FWY-3-L	06792  	Test harness SMHW090-2	06793  	06861 	Test harness SM6195043	
							

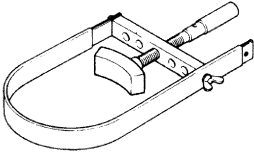
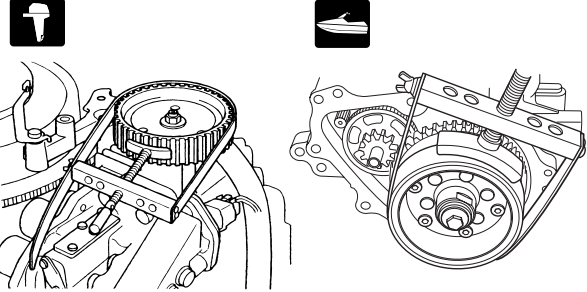
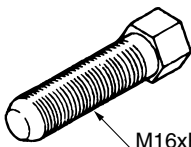
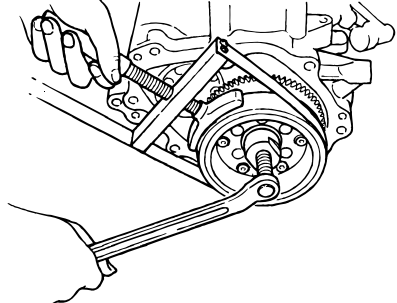
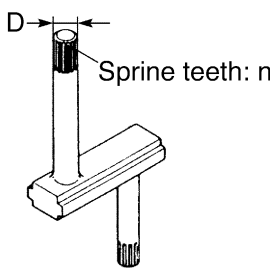
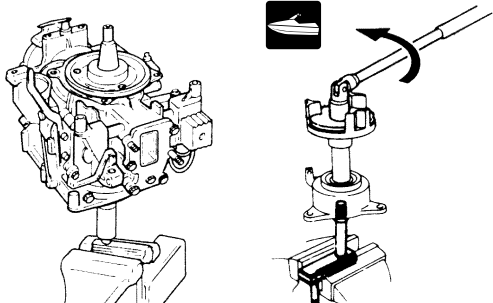
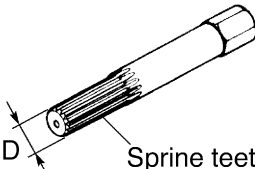
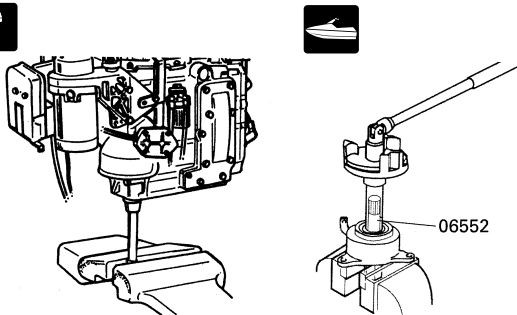
ENGINE SERVICE

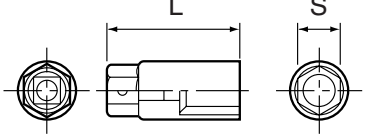

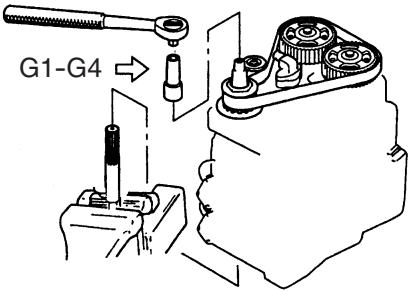
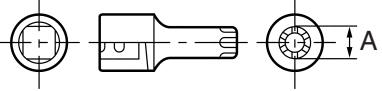

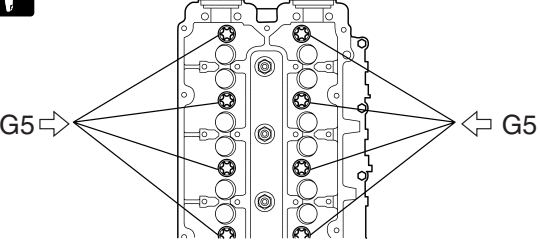
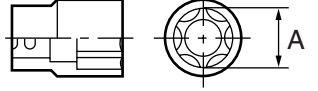

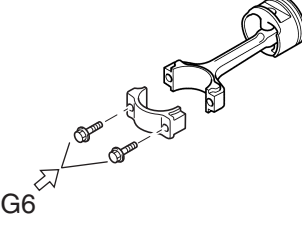
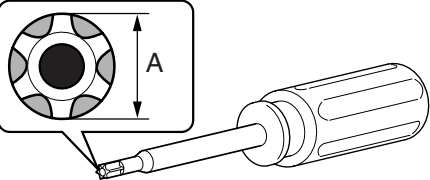

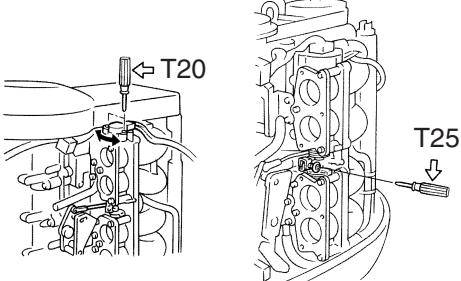
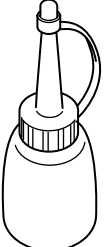

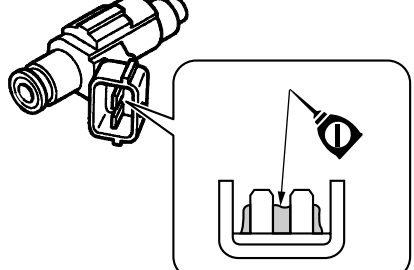
Tool No. 90890-	Tool name	Usage	Note																				
06521 Flywheel puller ①  ② 06901 • Bolt M8 x 34 ③ 06902 • Bolt M6 x 24		Bolt ① 5/8-18UNF ② 06901 M8 x 1.25 L: 34.0 ●: 12 ③ 06902 M6 x 1.0 L: 24.0 ●: 12																					
06522 Flywheel holder 																							
Small end bearing installer  <table border="1" data-bbox="454 1131 909 1388"> <thead> <tr> <th></th> <th>D1</th> <th>L1</th> </tr> </thead> <tbody> <tr> <td>06524</td> <td>12.0</td> <td>13.0</td> </tr> <tr> <td>06525</td> <td>16.0</td> <td>13.0</td> </tr> <tr> <td>06526</td> <td>18.0</td> <td>13.0</td> </tr> <tr> <td>06527</td> <td>20.0</td> <td>17.0</td> </tr> <tr> <td>06528</td> <td>21.5</td> <td>19.0</td> </tr> <tr> <td>06543</td> <td>14.0</td> <td>13.0</td> </tr> </tbody> </table>		D1	L1	06524	12.0	13.0	06525	16.0	13.0	06526	18.0	13.0	06527	20.0	17.0	06528	21.5	19.0	06543	14.0	13.0		
	D1	L1																					
06524	12.0	13.0																					
06525	16.0	13.0																					
06526	18.0	13.0																					
06527	20.0	17.0																					
06528	21.5	19.0																					
06543	14.0	13.0																					
06529 Piston slider ø70 06530 Piston slider ø85 06843 Piston slider ø58  ø: Standard set diameter		06529 ø: 70 (min ø59) 06530 ø: 85 (min ø75) 06843 ø: 58 (min ø49)																					
05158 Piston ring compressor 		ø: 60—115																					

TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note
06534	Bearing separator 		W: 25 x 107 d1: M10 x 1.25
06606	Driver rod LS 		L1: 101.0 d1: 5/8-18UNF
06663	Ball bearing attachment (Roller bearing installer) 		D1: 51.8 D2: 40 d1: 5/8-18UNF L1: 13 L2: 5
01235	Rotor holder 		
04086	Universal clutch holder 		

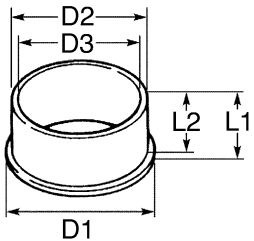

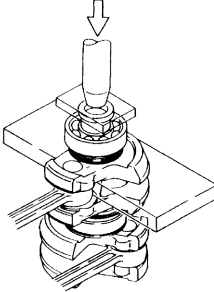
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage		Note
01701	Sheave holder 			
01080	Rotor puller 			
06069	Shaft holder 			Double shaft Sprine D x n: 18 x 16 D x n: 13 x 11
06355 06552 06561 06562	Crankshaft holder 16 Crankshaft holder 20 Crankshaft holder 12 Crankshaft holder 18 			Sprine 06355 D x n: 16 x 14 06552 D x n: 20 x 18 06561 D x n: 12 x 10 06562 D x n: 18 x 16




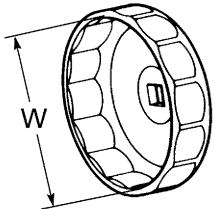


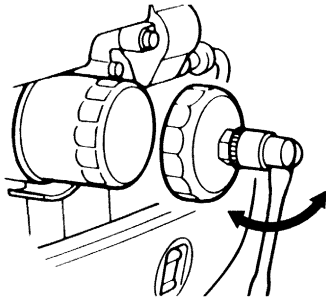
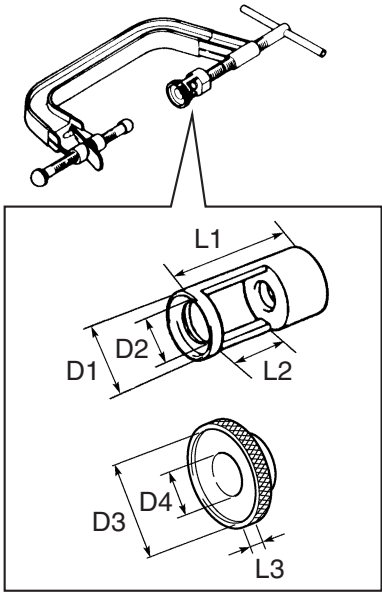


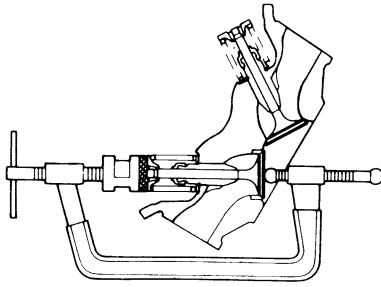



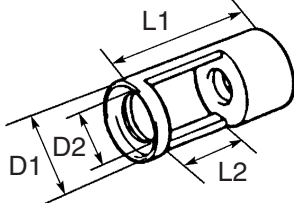


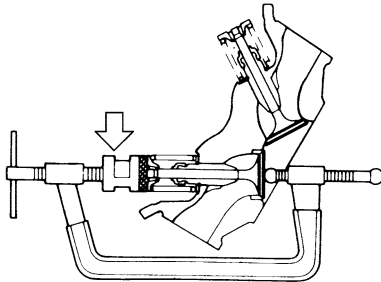
Tool No.	Tool name	Usage	Note
G1—G4 *1	Deep socket 1—4 	 	G1, S x L: 30 x 100 G2, S x L: 36 x 100 G3, S x L: 41 x 100 G4, S x L: 46 x 100
G5 *1	T-type TORX socket T55 	 	T55 A: 11.22
G6 *1	E-type TORX socket E10 	 	E10 A: 9.42
G7 *1 G8 *1	TORX tamper resistant driver T20 TORX tamper resistant driver T25 	 	T20 A: 3.86 T25 A: 4.43
06991	Injector grease 	 	for H.P.D.I. model

*1 G1-G8: General tool





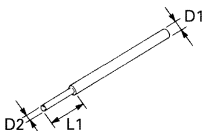

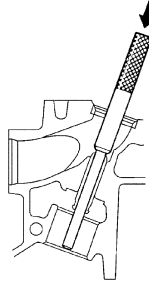





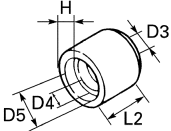

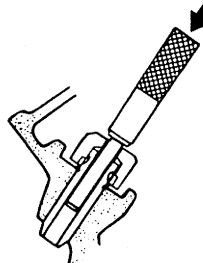




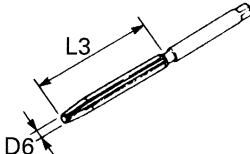

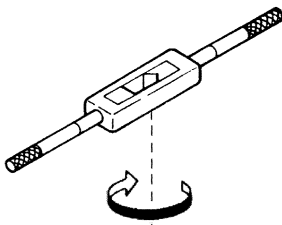
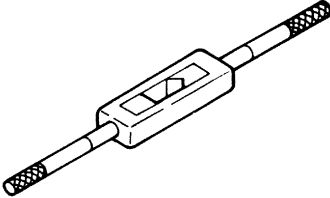
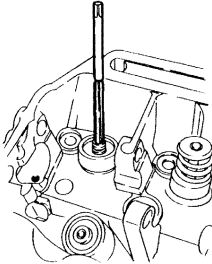
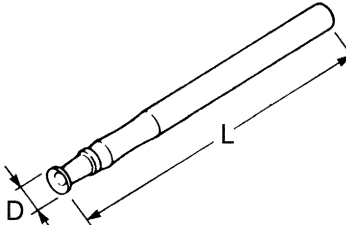

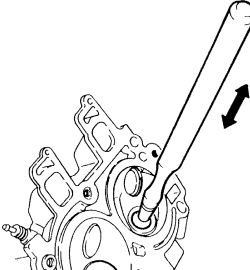
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage				Note	
Bearing inner race attachment 							
	D1	D2	D3	L1	L2		
06639	48.5	42.5	36.5	27.0	21.0		
06640	44.5	38.5	32.5	24.0	19.0		
06641	43.0	37.0	30.5	24.0	19.0		
06642	41.0	34.5	28.5	22.0	17.0		
06643	40.0	33.5	27.5	22.0	17.0		
06644	38.0	31.5	25.5	21.0	16.0		
06645	32.5	26.5	20.5	18.0	13.0		
06659	70.0	65.0	55.0	37.0	30.0		
06660	64.0	60.0	50.5	37.0	30.0		
06661	61.0	55.0	45.0	35.0	28.0		
06662	58.0	52.0	42.5	33.0	26.0		




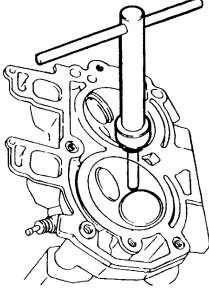
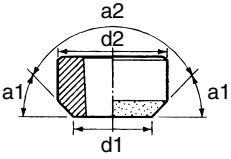



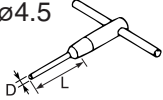





























4 stroke

Tool No. 90890-	Tool name	Usage	Note
01426   Oil filter wrench 64 06830  Oil filter wrench 72.5 	  	01426 W: 64 06830 W: 72.5	
04019 Valve spring compressor 	  	L1: 45 L2: 22 D1: 31.0 D2: 28.4 L3: 5 D3: 32.1 D4: 16	
04108  Valve spring 04114  compressor 06320  attachment 	  	04108 L1: 45 L2: 26 D1: 19.8 D2: 14 04114 L1: 43 L2: 26 D1: 19 D2: 17 06320 L1: 45 L2: 26 D1: 23.3 D2: 17	

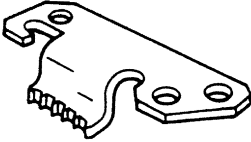
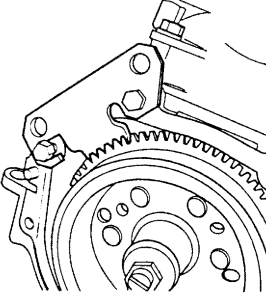
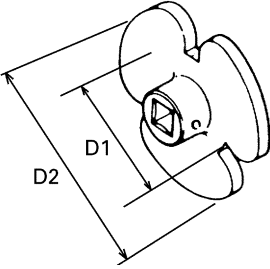
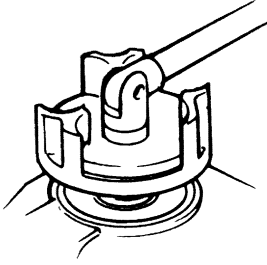
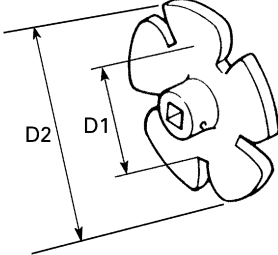
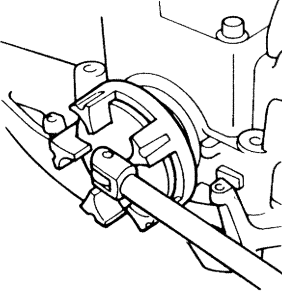
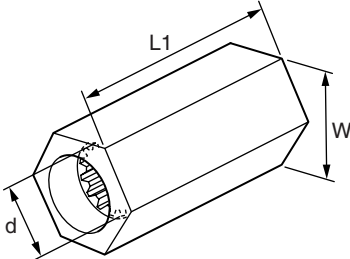
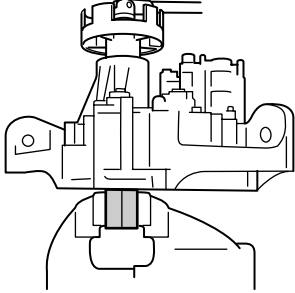
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note
06801  04064  04111  04116 	Valve guide remover/installer 5.4 Valve guide remover/installer 5.9 Valve guide remover 4.0 Valve guide remover 4.5 	 	06801 04111 L1: 40.0 L1: 30.0 D1: 9.0 D1: 9.0 D2: 5.4 D2: 4.0 04064 04116 L1: 45 L1: 30.0 D1: 10 D1: 9.0 D2: 5.9 D2: 4.5
06802  04015  06810  04112  04117 	Valve guide installer 5.4 Valve guide installer 5.6 Valve guide installer 5.5 Valve guide installer 4.0 Valve guide installer 4.5 	 	06802 06810 04117 L2: 13 L2: 22 L2: 22 D3: 5.4 D3: 5.5 D3: 4.5 D4: 9.2 D4: 9.9 D4: 8.3 D5: 12.0 D5: 12.0 D5: 10.0 H: 8.1 H: — H: 7.0 04015 04112 L2: 25 L2: 25 D3: 5.6 D3: 4.0 D4: 12.5 D4: 7.35 D5: 15.1 D5: 9.1 H: — H: 7.35
06804  04066  04113  04118 	Valve guide reamer 5.5 Valve guide reamer 6.0 Valve guide reamer 4.0 Valve guide reamer 4.5 	 	06804 04113 L3: 65 L3: 53 D6: 5.5 D6: 4.0 04066 04118 L3: 65 L3: 45 D6: 6.0 D6: 4.5
05041	Tap handle (5–6) 		05041 for 5–6 mm
04101	Valve lapper 	 	L: 145 D: 14

TOOL DESCRIPTION





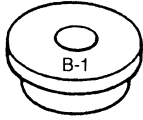
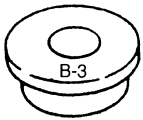
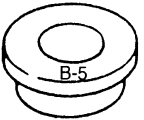
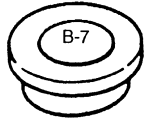
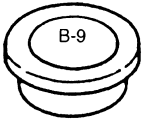
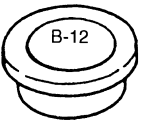

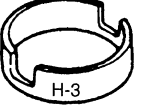



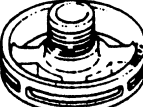

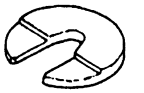


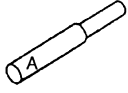
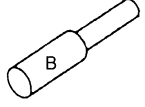
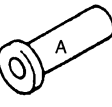
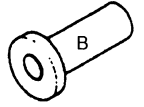
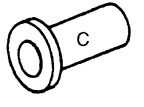


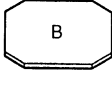
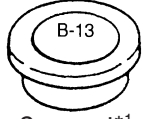


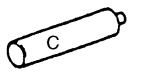
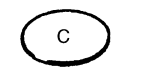
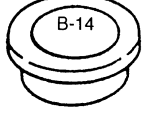

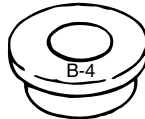
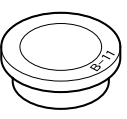
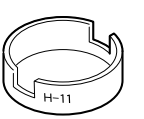
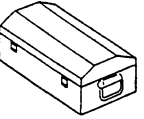
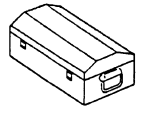

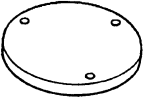

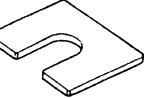

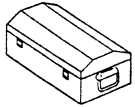

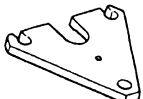


Tool No. 90890-	Tool name	Usage	Note																																																																													
06316 	Valve seat cutter holder $\phi 5.5$	   	06316 06811 D: $\phi 5.5$ D: $\phi 4.0$ L: 60 L: 60																																																																													
06553 	Valve seat cutter holder $\phi 6.0$		06553 06812 D: $\phi 6$ D: $\phi 4.5$ L: 80 L: 60																																																																													
06811 	Valve seat cutter holder $\phi 4.0$																																																																															
06812 	Valve seat cutter holder $\phi 4.5$																																																																															
 <p data-bbox="320 725 528 757">Valve seat cutter</p> 																																																																																
                           	<table border="1"> <thead> <tr> <th rowspan="2">Tool No.</th> <th rowspan="2">Tool name (a1-d2)</th> <th colspan="2">Dimension</th> <th rowspan="2">Outside diameter (d2)</th> </tr> <tr> <th>Cutter angle (a2)</th> <th>Inside diameter (d1)</th> </tr> </thead> <tbody> <tr><td>06315</td><td>Valve seat cutter 60°-26</td><td>60°</td><td>$\phi 18.0$</td><td>$\phi 26.0$</td></tr> <tr><td>06323</td><td>Valve seat cutter 60°-31</td><td>60°</td><td>$\phi 18.0$</td><td>$\phi 34.0$</td></tr> <tr><td>06324</td><td>Valve seat cutter 60°-36</td><td>60°</td><td>$\phi 22.0$</td><td>$\phi 36.0$</td></tr> <tr><td>06312</td><td>Valve seat cutter 45°-27.5</td><td>90°</td><td>$\phi 19.5$</td><td>$\phi 27.5$</td></tr> <tr><td>06555</td><td>Valve seat cutter 45°-30</td><td>90°</td><td>$\phi 24.0$</td><td>$\phi 30.0$</td></tr> <tr><td>06325</td><td>Valve seat cutter 45°-35</td><td>90°</td><td>$\phi 24.0$</td><td>$\phi 35.0$</td></tr> <tr><td>06313</td><td>Valve seat cutter 5°-25</td><td>170°</td><td>$\phi 16.0$</td><td>$\phi 25.0$</td></tr> <tr><td>06314</td><td>Valve seat cutter 5°-29</td><td>170°</td><td>$\phi 16.0$</td><td>$\phi 29.0$</td></tr> <tr><td>06326</td><td>Valve seat cutter 30°-32.5</td><td>120°</td><td>$\phi 22.0$</td><td>$\phi 32.5$</td></tr> <tr><td>06327</td><td>Valve seat cutter 30°-35</td><td>120°</td><td>$\phi 24.0$</td><td>$\phi 35.0$</td></tr> <tr><td>06328</td><td>Valve seat cutter 30°-27</td><td>120°</td><td>$\phi 19.0$</td><td>$\phi 27.0$</td></tr> <tr><td>06813</td><td>Valve seat cutter 60°-22</td><td>60°</td><td>$\phi 10.0$</td><td>$\phi 22.0$</td></tr> <tr><td>06814</td><td>Valve seat cutter 45°-24</td><td>90°</td><td>$\phi 10.0$</td><td>$\phi 24.0$</td></tr> <tr><td>06815</td><td>Valve seat cutter 30°-24</td><td>120°</td><td>$\phi 10.0$</td><td>$\phi 24.0$</td></tr> </tbody> </table>	Tool No.	Tool name (a1-d2)	Dimension		Outside diameter (d2)	Cutter angle (a2)	Inside diameter (d1)	06315	Valve seat cutter 60°-26	60°	$\phi 18.0$	$\phi 26.0$	06323	Valve seat cutter 60°-31	60°	$\phi 18.0$	$\phi 34.0$	06324	Valve seat cutter 60°-36	60°	$\phi 22.0$	$\phi 36.0$	06312	Valve seat cutter 45°-27.5	90°	$\phi 19.5$	$\phi 27.5$	06555	Valve seat cutter 45°-30	90°	$\phi 24.0$	$\phi 30.0$	06325	Valve seat cutter 45°-35	90°	$\phi 24.0$	$\phi 35.0$	06313	Valve seat cutter 5°-25	170°	$\phi 16.0$	$\phi 25.0$	06314	Valve seat cutter 5°-29	170°	$\phi 16.0$	$\phi 29.0$	06326	Valve seat cutter 30°-32.5	120°	$\phi 22.0$	$\phi 32.5$	06327	Valve seat cutter 30°-35	120°	$\phi 24.0$	$\phi 35.0$	06328	Valve seat cutter 30°-27	120°	$\phi 19.0$	$\phi 27.0$	06813	Valve seat cutter 60°-22	60°	$\phi 10.0$	$\phi 22.0$	06814	Valve seat cutter 45°-24	90°	$\phi 10.0$	$\phi 24.0$	06815	Valve seat cutter 30°-24	120°	$\phi 10.0$	$\phi 24.0$		
Tool No.	Tool name (a1-d2)			Dimension			Outside diameter (d2)																																																																									
		Cutter angle (a2)	Inside diameter (d1)																																																																													
06315	Valve seat cutter 60°-26	60°	$\phi 18.0$	$\phi 26.0$																																																																												
06323	Valve seat cutter 60°-31	60°	$\phi 18.0$	$\phi 34.0$																																																																												
06324	Valve seat cutter 60°-36	60°	$\phi 22.0$	$\phi 36.0$																																																																												
06312	Valve seat cutter 45°-27.5	90°	$\phi 19.5$	$\phi 27.5$																																																																												
06555	Valve seat cutter 45°-30	90°	$\phi 24.0$	$\phi 30.0$																																																																												
06325	Valve seat cutter 45°-35	90°	$\phi 24.0$	$\phi 35.0$																																																																												
06313	Valve seat cutter 5°-25	170°	$\phi 16.0$	$\phi 25.0$																																																																												
06314	Valve seat cutter 5°-29	170°	$\phi 16.0$	$\phi 29.0$																																																																												
06326	Valve seat cutter 30°-32.5	120°	$\phi 22.0$	$\phi 32.5$																																																																												
06327	Valve seat cutter 30°-35	120°	$\phi 24.0$	$\phi 35.0$																																																																												
06328	Valve seat cutter 30°-27	120°	$\phi 19.0$	$\phi 27.0$																																																																												
06813	Valve seat cutter 60°-22	60°	$\phi 10.0$	$\phi 22.0$																																																																												
06814	Valve seat cutter 45°-24	90°	$\phi 10.0$	$\phi 24.0$																																																																												
06815	Valve seat cutter 30°-24	120°	$\phi 10.0$	$\phi 24.0$																																																																												

Watercraft

Tool No. 90890-	Tool name	Usage	Note
06550	Flywheel holder 	 	
06425	Coupler wrench 	 	3 petals D1: 55 D2: 99.6
06546 06551	Coupler wrench Coupler wrench 	 	5 petals 06546 D1: 58 D2: 96 06551 D1: 52 D2: 96
06586	Shaft holder 	 	W: 38 N: 13 (Number of teeth) L1: 100 d: 25 (Shaft)



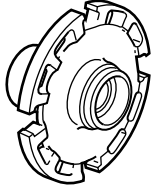
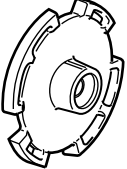

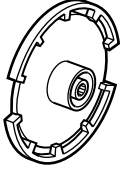
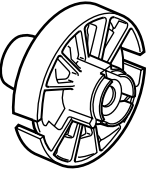
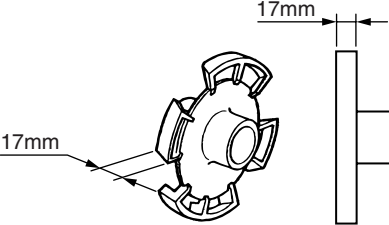
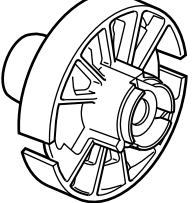
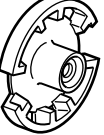
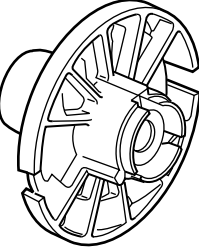
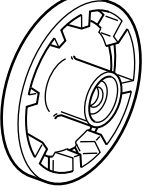
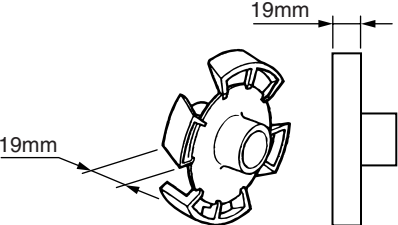

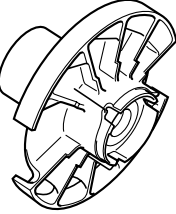
Crankshaft disassembly and reassembly

The tools on this page can be ordered from the Marine Service Division of Yamaha Motor Co., Ltd.

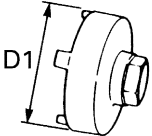

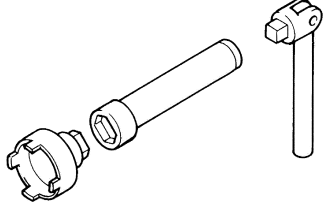
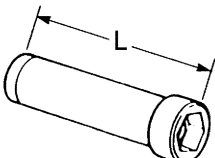
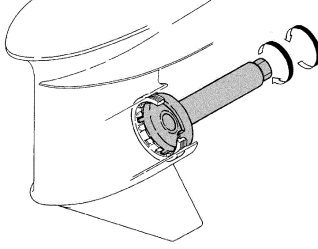
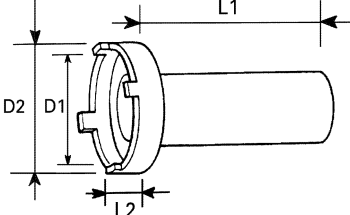

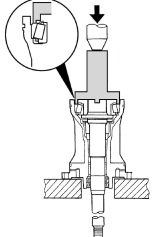
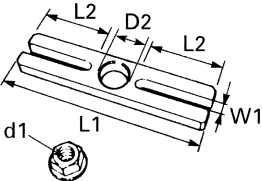

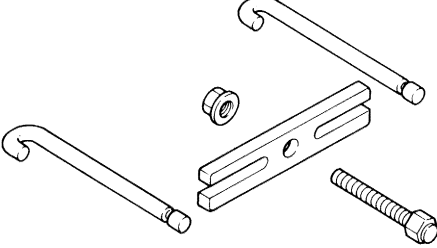
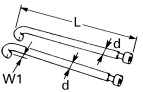
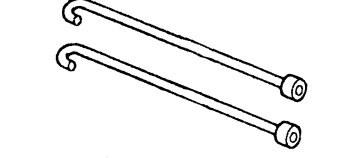
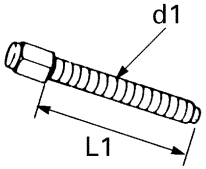
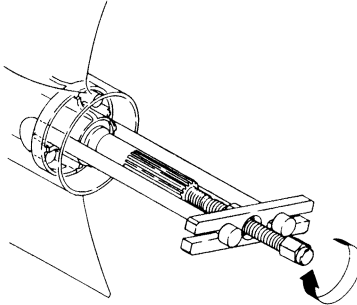
Tool No. 90890-02422 Crank shaft jig set						
02351 	02352 	02353  4 pc-set*1	02354  4 pc-set*1	02355  B-1	02357  B-3 2 pc-set*1	02359  B-5 2 pc-set*1
02361  B-7	02363  B-9	02366  B-12	02367  H-1	02369  H-3	02371  H-5	02376  H-10
02379  H-13	02384 	02385 	02386 	02387  2 pc-set*1	02388  2 pc-set*1	02389  A
02390  B	02391  A	02392  B	02393  C	02394  2 pc-set*1	02395  A	02396  B
02399  B-13 2 pc-set*1	02401  H-18	02402  C 2 pc-set*1	02403  C	02404  C	02419  B-14	06590  H-19
02358  B-4	02365  B-11	02377  H-11				
90890-02418 Crank separator kit (set 02416 + 02417)						
90890-02416 Disassembling kit						
02407  6 pc-set*1	02408 	02409  3 pc-set*1	02410 	02411 		
90890-02417 Assembling kit						
02412  3 pc-set*1	02413 	02414 	02415 			

*1 The figure for this part indicates the quantity of the parts ordered in a set or a kit.

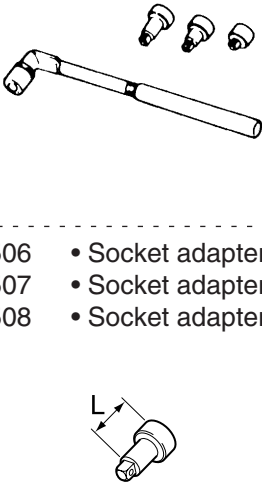
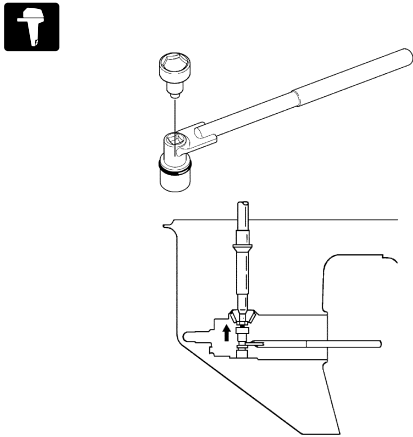



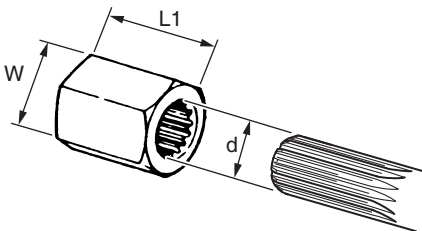
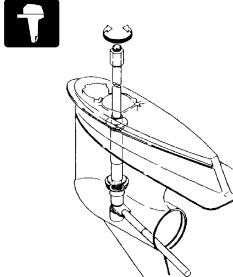
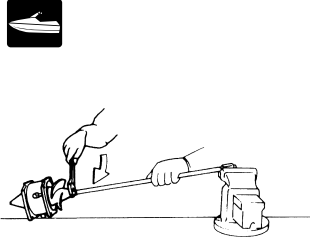
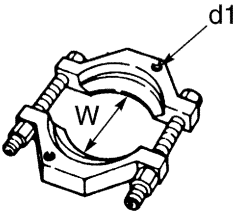
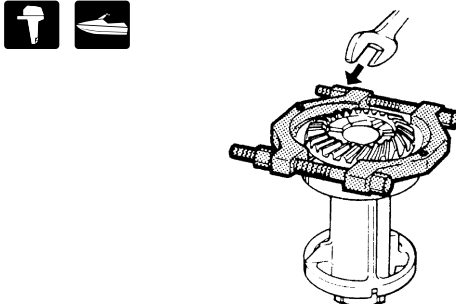
Test propeller


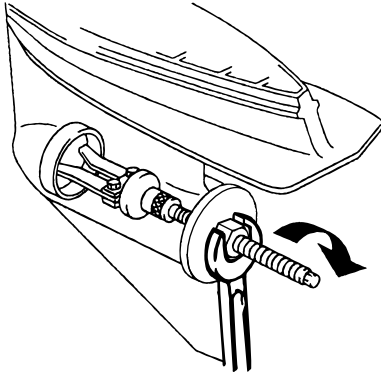
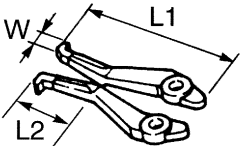

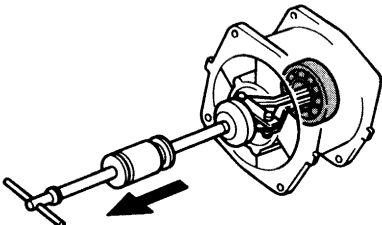
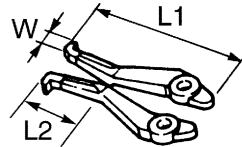

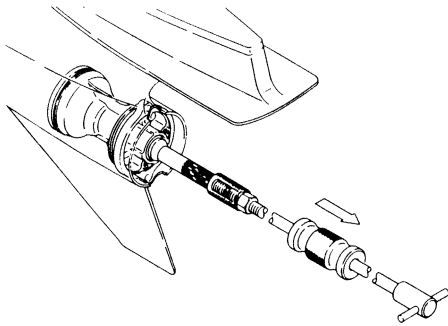
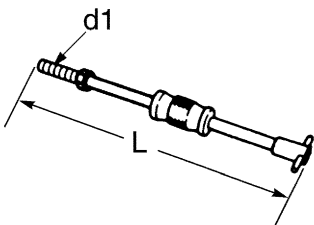
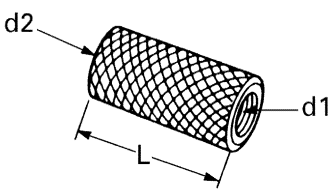
Tool No. 90890-	Tool name				
01601	Test propeller (646)	01609	Test propeller (647)	01611	Test propeller (663)
					
01613	Test propeller (664)	01618	Test propeller (676)	01619	Test propeller (683)
					
01620	Test propeller (688)	01621	Test propeller (689)	01624	Test propeller (6E5)
					
01625	Test propeller (6G1)	01626	Test propeller (6G5)	01627	Test propeller (6G8)
					
01629	Test propeller (61N)	01630	Test propeller (6L5)	01631	Test propeller (6L6)
					

LOWER UNIT SERVICE/JET PUMP SERVICE

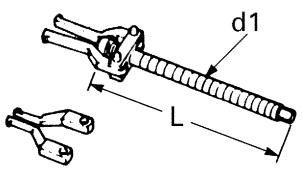
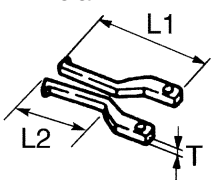

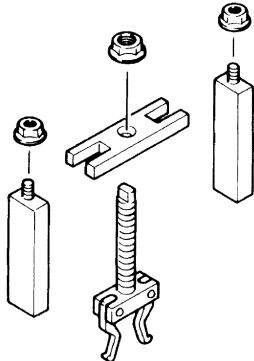
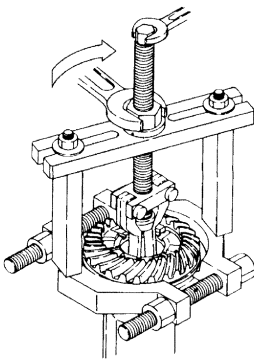
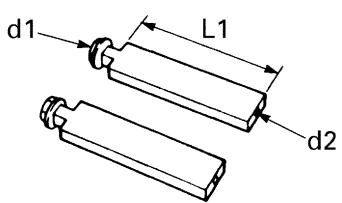
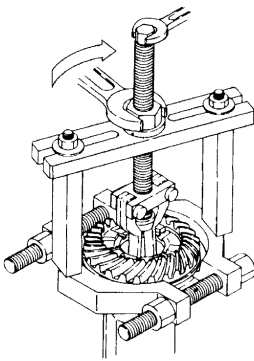
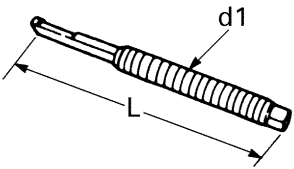

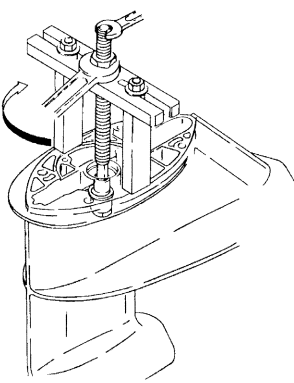
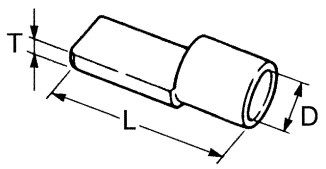
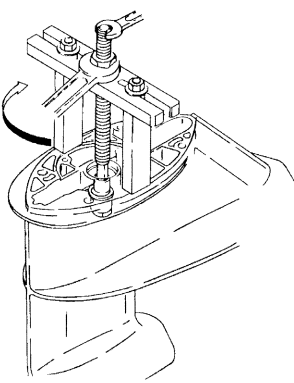
Tool No. 90890-	Tool name	Usage	Note
06509 06510 06511 06512	Ring nut wrench 1-4 	 	06509 D1: 67 ⬤: 32 06507 D1: 70 ⬤: 32 06511 D1: 86 ⬤: 32 06512 D1: 94 ⬤: 32
06513	Ring nut wrench extension 		L: 172 ⬤: 32
06578	Ring nut wrench 	 	06578 D1: 75 D2: 86 L1: 147 L2: 25
06501	Stopper guide plate 	 	L1: 170 L2: 60 W1: 8 d1: M14 x 1.5 D2: 24.5
06502*1 06503*1 06564*1	Bearing housing puller claw L Bearing housing puller claw M Bearing housing puller claw S 		06502 06564 L1: 290 L1: 220 L2: 10 W1: 8 d: 12 d: 6 06503 L1: 220 W1: 8 d: 8 Use with 06501
06504	Center bolt 		L: 113.5 d1: M14 x 1.5 ⬤: 19 Use with 06501

*1 2 pc-set

Tool No. 90890-	Tool name	Usage				Note
06715 (06505)	Pinion nut holder  <p>06506 • Socket adapter 1 06507 • Socket adapter 2 06508 • Socket adapter 3</p>					06506  : 17 L: 17.0 06507  : 22 L: 27.0 06508  : 22 L: 40.0 Use with 06715 (06505)
						
	Tool name	W	Number of teeth	L1	d (Shaft)	
	06515 Drive shaft holder 1	22	11	30	13	
	06516 Drive shaft holder 2	22	12	33	14	
	06517 Drive shaft holder 3	22	14	33	16	
	06518 Drive shaft holder 4	30	16	35	18	
	06519 Drive shaft holder 5	30	18	35	20	
	06520 Drive shaft holder 6	30	20	35	22	
	06565 Drive shaft holder 7	22	10	30	12	
06534	Bearing separator 					W: 25—107 d1: M10 x 1.25

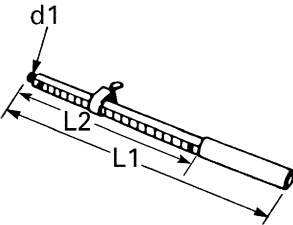
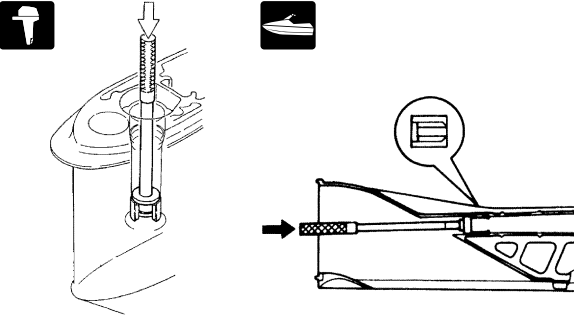
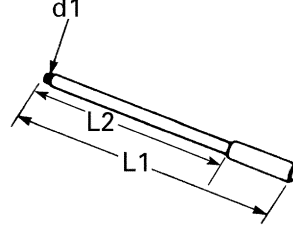
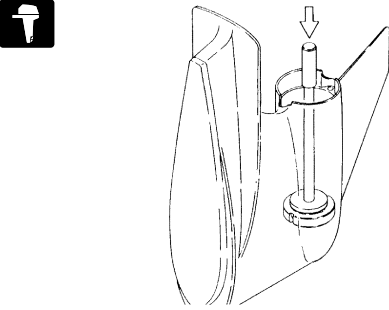
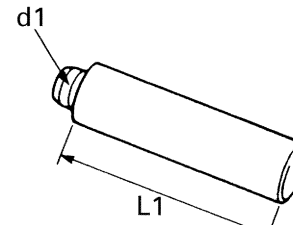
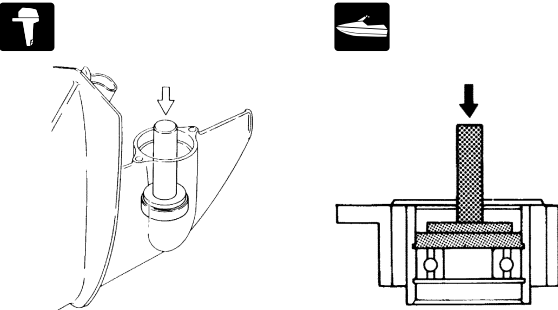
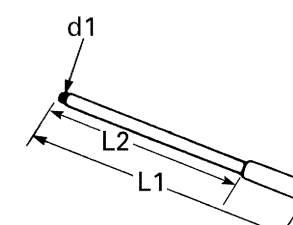
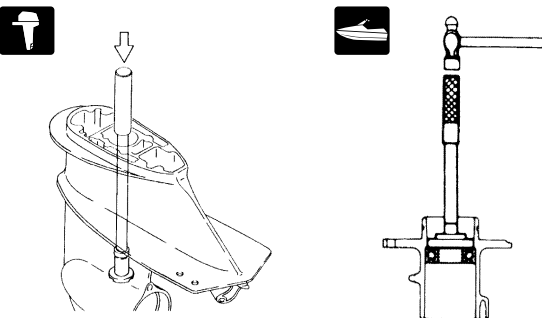
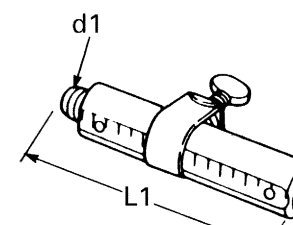
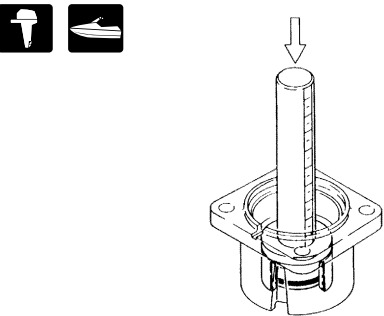
Tool No. 90890-	Tool name	Usage	Note
06523	Bearing outer race puller assembly		06523 d1: 5/8-18UNF
06532*1 • Outer race puller claw A			06532 L1: 122.0 L2: 53.0 W: 10.0
			06533 L1: 124.0 L2: 55.0 W: 14.0
06533*1	Outer race puller claw B		Use with 06523
			d1: 5/8-18UNF L: 590
06531	Slide hammer handle		For counter rotation model
		L: 60.0 d1: M18 x 1.5 d2: 5/8-18UNF	Use with 06531
06514	Puller head		
			

*1 2 pc-set


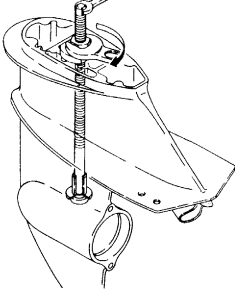

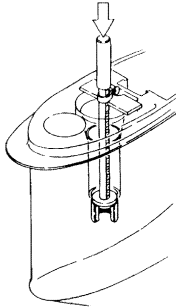

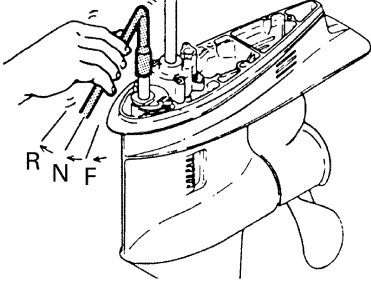

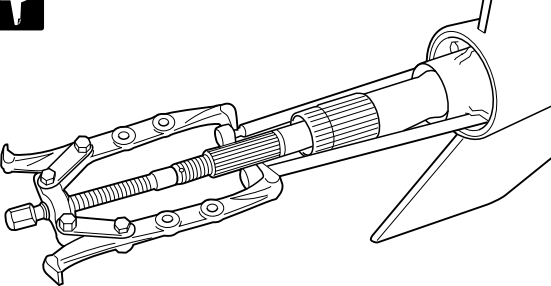
Tool No. 90890-	Tool name	Usage	Note
<p>06535 Bearing puller assembly</p>  <p>06536*1 • Bearing puller claw 1 06537*1 • Bearing puller claw 2</p> 	  	<p>06535 L: 185.0 d1: M14 x 1.5</p> <p>06536 L1: 86.0 L2: 48.0 T: 10.0</p> <p>06537 L1: 71.5 L2: 27.5 T: 6.0</p>	
<p>06538*1 Stopper guide stand</p> 		<p>L1: 100.0 d1: M8 x 1.25 d2: M8 x 1.25</p> <p>Use with 06501</p>	
<p>06646 Bushing puller center bolt</p> 	 	<p>L: 170.0 d1: M14 x 1.5</p>	
<p>06648 Bushing puller spacer</p> 		<p>06648 L: 44.0 D: 15.0 T: 4.6</p>	

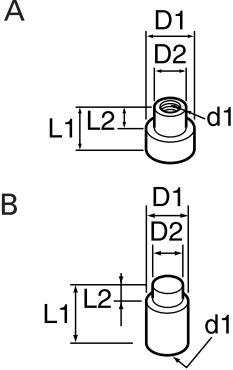

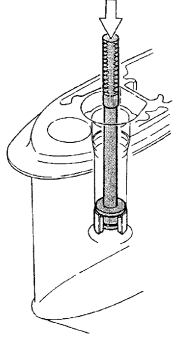
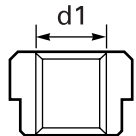
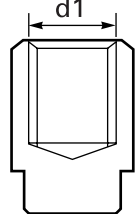
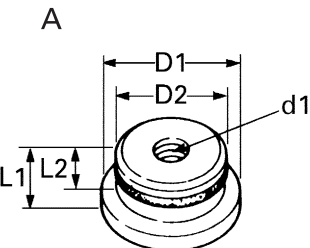


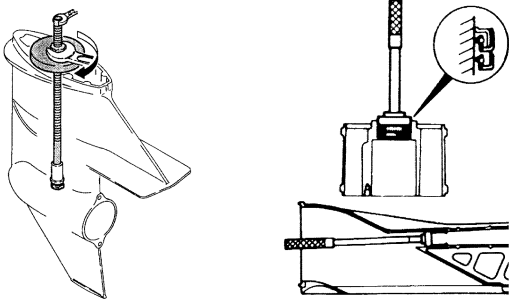
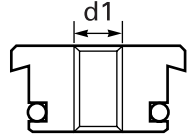
*1 2 pc-set

TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note
06602	Driver rod SL 		L1: 311 L2: 221 d1: M10 x 1.25
06605	Driver rod LL 		L1: 381 L2: 291 d1: 5/8-18UNF
06606	Driver rod LS 		L1: 101 d1: 5/8-18UNF
06652	Driver rod L3 		L1: 281 L2: 191 d1: M10 x 1.25
06604	Driver rod SS 		L1: 101 d1: M10 x 1.25

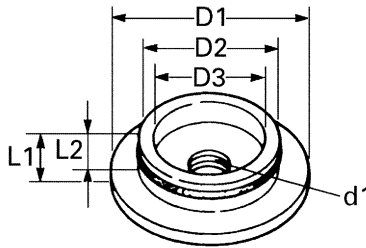
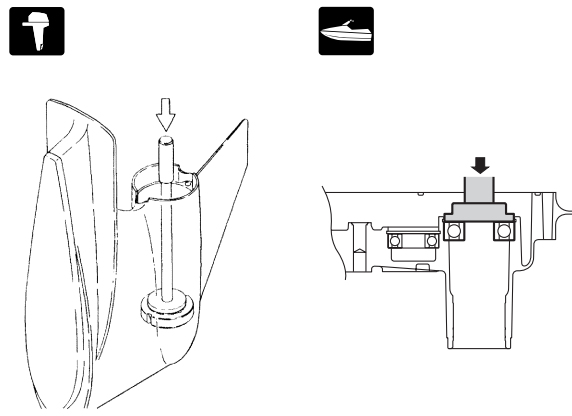
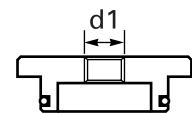
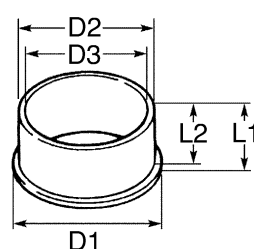
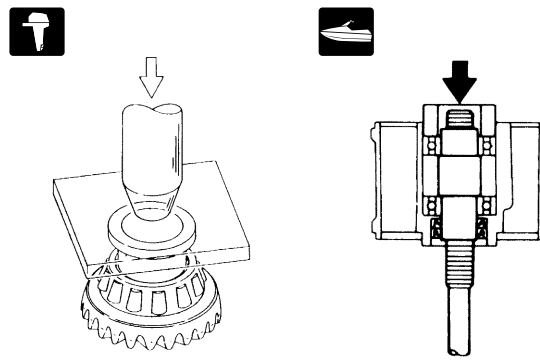
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note
06601	Bushing installer center bolt	 	L1: 280 d1: M10 x 1.25
06603	Bearing depth plate	 	L1: 100.0 L2: 30.0 t: 5
06052	Shift rod push arm	 	
06540	Gear puller	 	W: 50—100 H: Max 150

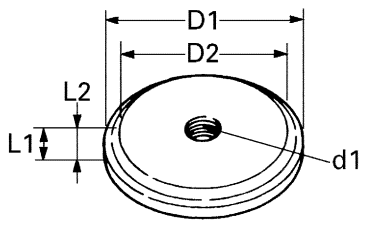
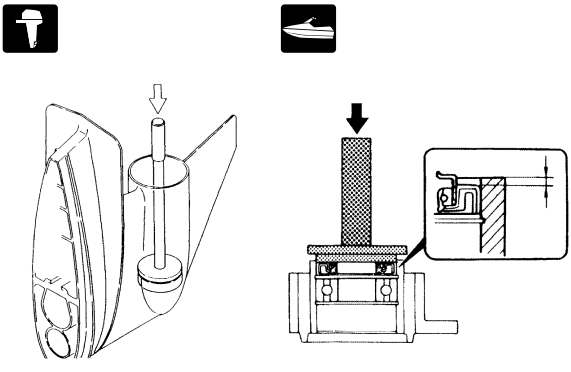
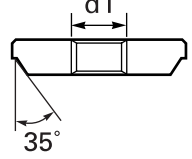
Tool No. 90890-	Tool name	Usage	Note			
	Bushing attachment 	 	A Through hole  B Closed hole 			
A type	D1	D2	L1	L2	d1	
06649	18.0	14.0	12.0	5.0	M10 x P1.25	
B type	D1	D2	L1	L2	d1	
06650	15.0	11.8	20.0	5.0	M10 x P1.25	
06651	14.0	10.8	20.0	5.0	M10 x P1.25	
	Needle bearing attachment 	  	A Through hole 			
A type	D1	D2	L1	L2	d1	Note
06607	52.0	45.0	17.0	12.0	M10 x P1.25	Without O-ring
06608	47.0	40.0	17.0	12.0	M10 x P1.25	↑
06609	37.5	28.5	17.0	12.0	M10 x P1.25	With O-ring
06610	37.0	30.0	17.0	12.0	M10 x P1.25	↑
06611	33.0	25.4	16.5	11.5	M10 x P1.25	↑
06612	32.0	25.0	16.5	11.5	M10 x P1.25	↑
06613	30.0	23.8	16.5	11.5	M10 x P1.25	↑
06614	28.0	22.0	16.5	11.5	M10 x P1.25	↑
06615	26.0	20.0	16.5	11.5	M10 x P1.25	↑
06616	23.0	17.0	16.5	11.5	M10 x P1.25	↑
06653	35.0	28.0	17.0	12.0	M10 x P1.25	↑
06654	60.3	50.7	17.0	12.0	M10 x P1.25	↑

TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage					Note
	Needle bearing attachment						B Closed hole
	B 						
B type	D1	D2	L1	L2	d1	Note	
06617	20.0	14.0	19.0	14.0	M10 x P1.25	With O-ring	
06618	17.5	12.7	16.5	13.5	M10 x P1.25	↑	
	Ball bearing attachment						A Closed hole B Through hole
	A B 						
A type	D1	D2	L1	L2	d1	Note	
06631	48.9	30.0	15.5	10.5	5/8-18UNF	With O-ring	
06632	46.5	25.0	15.0	10.0	5/8-18UNF	↑	
06633	40.5	25.0	15.0	10.0	5/8-18UNF	↑	
06636	38.0	28.5	15.0	10.0	5/8-18UNF	↑	
06655	40.0	32.0	17.0	12.0	5/8-18UNF	↑	
B type	D1	D2	L1	L2	d1	Note	
06634	41.5	20.0	23.0	8.0	5/8-18UNF	With O-ring	
06635	39.5	17.0	23.0	8.0	5/8-18UNF	↑	
06637	34.5	17.0	23.0	8.0	5/8-18UNF	↑	
06638	25.5	10.0	23.0	8.0	5/8-18UNF	↑	

Tool No. 90890-	Tool name	Usage	Note																																																																								
	Ball bearing attachment 																																																																										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>D1</th> <th>D2</th> <th>D3</th> <th>L1</th> <th>L2</th> <th>d1</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>06629</td> <td>89.0</td> <td>59.0</td> <td>—</td> <td>21.5</td> <td>13.5</td> <td>5/8-18UNF</td> <td>With O-ring</td> </tr> <tr> <td>06630</td> <td>59.5</td> <td>45.0</td> <td>33.0</td> <td>21.5</td> <td>13.5</td> <td>5/8-18UNF</td> <td>↑</td> </tr> <tr> <td>06656</td> <td>89.0</td> <td>49.5</td> <td>38.0</td> <td>21.5</td> <td>13.5</td> <td>5/8-18UNF</td> <td>↑</td> </tr> <tr> <td>06657</td> <td>70.0</td> <td>50.8</td> <td>38.0</td> <td>21.5</td> <td>13.5</td> <td>5/8-18UNF</td> <td>↑</td> </tr> </tbody> </table>		D1	D2	D3	L1	L2	d1	Note	06629	89.0	59.0	—	21.5	13.5	5/8-18UNF	With O-ring	06630	59.5	45.0	33.0	21.5	13.5	5/8-18UNF	↑	06656	89.0	49.5	38.0	21.5	13.5	5/8-18UNF	↑	06657	70.0	50.8	38.0	21.5	13.5	5/8-18UNF	↑																																		
	D1	D2	D3	L1	L2	d1	Note																																																																				
06629	89.0	59.0	—	21.5	13.5	5/8-18UNF	With O-ring																																																																				
06630	59.5	45.0	33.0	21.5	13.5	5/8-18UNF	↑																																																																				
06656	89.0	49.5	38.0	21.5	13.5	5/8-18UNF	↑																																																																				
06657	70.0	50.8	38.0	21.5	13.5	5/8-18UNF	↑																																																																				
	Bearing inner race attachment 																																																																										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>D1</th> <th>D2</th> <th>D3</th> <th>L1</th> <th>L2</th> </tr> </thead> <tbody> <tr> <td>06639</td> <td>48.5</td> <td>42.5</td> <td>36.5</td> <td>27.0</td> <td>21.0</td> </tr> <tr> <td>06640</td> <td>44.5</td> <td>38.5</td> <td>32.5</td> <td>24.0</td> <td>19.0</td> </tr> <tr> <td>06641</td> <td>43.0</td> <td>37.0</td> <td>30.5</td> <td>24.0</td> <td>19.0</td> </tr> <tr> <td>06642</td> <td>41.0</td> <td>34.5</td> <td>28.5</td> <td>22.0</td> <td>17.0</td> </tr> <tr> <td>06643</td> <td>40.0</td> <td>33.5</td> <td>27.5</td> <td>22.0</td> <td>17.0</td> </tr> <tr> <td>06644</td> <td>38.0</td> <td>31.5</td> <td>25.5</td> <td>21.0</td> <td>16.0</td> </tr> <tr> <td>06645</td> <td>32.5</td> <td>26.5</td> <td>20.5</td> <td>18.0</td> <td>13.0</td> </tr> <tr> <td>06659</td> <td>70.0</td> <td>65.0</td> <td>55.0</td> <td>37.0</td> <td>30.0</td> </tr> <tr> <td>06660</td> <td>64.0</td> <td>60.0</td> <td>50.5</td> <td>37.0</td> <td>30.0</td> </tr> <tr> <td>06661</td> <td>61.0</td> <td>55.0</td> <td>45.0</td> <td>35.0</td> <td>28.0</td> </tr> <tr> <td>06662</td> <td>58.0</td> <td>52.0</td> <td>42.5</td> <td>33.0</td> <td>26.0</td> </tr> </tbody> </table>		D1	D2	D3	L1	L2	06639	48.5	42.5	36.5	27.0	21.0	06640	44.5	38.5	32.5	24.0	19.0	06641	43.0	37.0	30.5	24.0	19.0	06642	41.0	34.5	28.5	22.0	17.0	06643	40.0	33.5	27.5	22.0	17.0	06644	38.0	31.5	25.5	21.0	16.0	06645	32.5	26.5	20.5	18.0	13.0	06659	70.0	65.0	55.0	37.0	30.0	06660	64.0	60.0	50.5	37.0	30.0	06661	61.0	55.0	45.0	35.0	28.0	06662	58.0	52.0	42.5	33.0	26.0		
	D1	D2	D3	L1	L2																																																																						
06639	48.5	42.5	36.5	27.0	21.0																																																																						
06640	44.5	38.5	32.5	24.0	19.0																																																																						
06641	43.0	37.0	30.5	24.0	19.0																																																																						
06642	41.0	34.5	28.5	22.0	17.0																																																																						
06643	40.0	33.5	27.5	22.0	17.0																																																																						
06644	38.0	31.5	25.5	21.0	16.0																																																																						
06645	32.5	26.5	20.5	18.0	13.0																																																																						
06659	70.0	65.0	55.0	37.0	30.0																																																																						
06660	64.0	60.0	50.5	37.0	30.0																																																																						
06661	61.0	55.0	45.0	35.0	28.0																																																																						
06662	58.0	52.0	42.5	33.0	26.0																																																																						

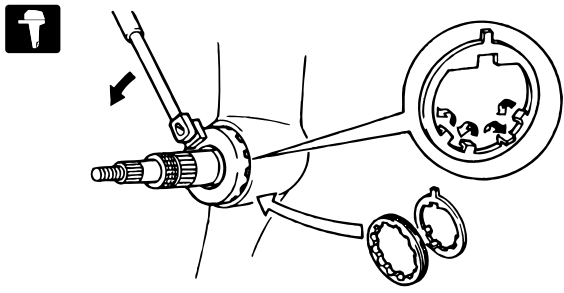
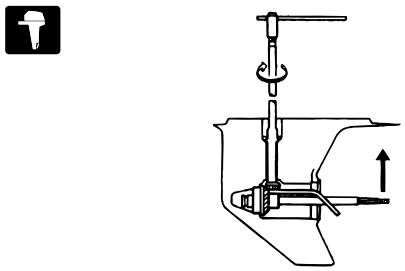
TOOL DESCRIPTION

Tool No. 90890-	Tool name	Usage	Note																																																																								
	Bearing outer race attachment 		Taper roller bearing 																																																																								
		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>D1</th> <th>D2</th> <th>L1</th> <th>L2</th> <th>d1</th> </tr> </thead> <tbody> <tr><td>06619</td><td>90.0</td><td>85.0</td><td>12.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06620</td><td>82.5</td><td>76.0</td><td>12.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06621</td><td>79.0</td><td>72.5</td><td>12.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06622</td><td>65.0</td><td>61.0</td><td>12.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06623</td><td>58.0</td><td>55.0</td><td>11.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06624</td><td>52.0</td><td>49.0</td><td>11.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06625</td><td>52.0</td><td>48.0</td><td>11.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06626</td><td>50.0</td><td>47.0</td><td>11.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06627</td><td>47.0</td><td>44.0</td><td>11.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06628</td><td>42.0</td><td>38.8</td><td>11.0</td><td>5.0</td><td>5/8-18UNF</td></tr> <tr><td>06658</td><td>95.0</td><td>90.1</td><td>12.0</td><td>5.0</td><td>5/8-18UNF</td></tr> </tbody> </table>		D1	D2	L1	L2	d1	06619	90.0	85.0	12.0	5.0	5/8-18UNF	06620	82.5	76.0	12.0	5.0	5/8-18UNF	06621	79.0	72.5	12.0	5.0	5/8-18UNF	06622	65.0	61.0	12.0	5.0	5/8-18UNF	06623	58.0	55.0	11.0	5.0	5/8-18UNF	06624	52.0	49.0	11.0	5.0	5/8-18UNF	06625	52.0	48.0	11.0	5.0	5/8-18UNF	06626	50.0	47.0	11.0	5.0	5/8-18UNF	06627	47.0	44.0	11.0	5.0	5/8-18UNF	06628	42.0	38.8	11.0	5.0	5/8-18UNF	06658	95.0	90.1	12.0	5.0	5/8-18UNF	
	D1	D2	L1	L2	d1																																																																						
06619	90.0	85.0	12.0	5.0	5/8-18UNF																																																																						
06620	82.5	76.0	12.0	5.0	5/8-18UNF																																																																						
06621	79.0	72.5	12.0	5.0	5/8-18UNF																																																																						
06622	65.0	61.0	12.0	5.0	5/8-18UNF																																																																						
06623	58.0	55.0	11.0	5.0	5/8-18UNF																																																																						
06624	52.0	49.0	11.0	5.0	5/8-18UNF																																																																						
06625	52.0	48.0	11.0	5.0	5/8-18UNF																																																																						
06626	50.0	47.0	11.0	5.0	5/8-18UNF																																																																						
06627	47.0	44.0	11.0	5.0	5/8-18UNF																																																																						
06628	42.0	38.8	11.0	5.0	5/8-18UNF																																																																						
06658	95.0	90.1	12.0	5.0	5/8-18UNF																																																																						


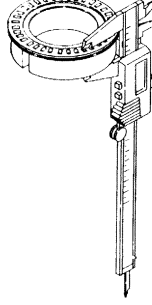

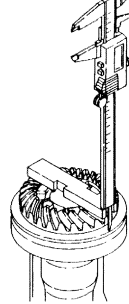

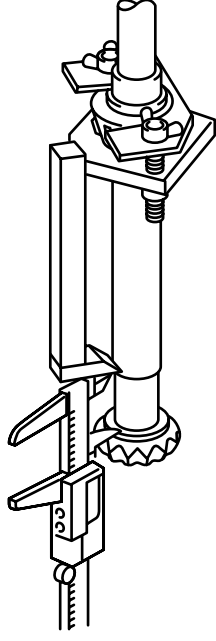

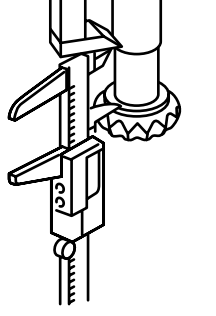

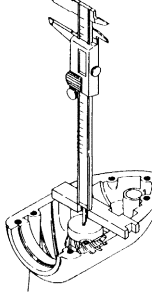
Dual propeller model

SUPPLIER : K & L Supply Company

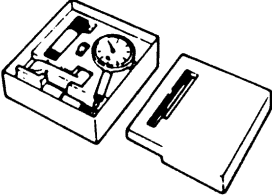

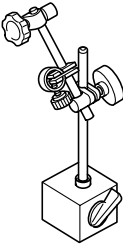
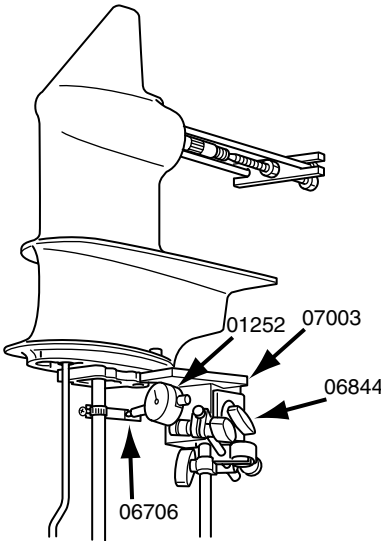
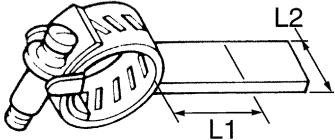
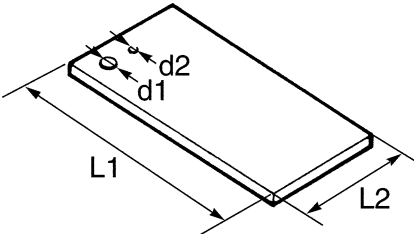
Order or Reference (Mr. Chris Campbell K & L supply (USA)
Tel : +1-408-727-6767, Fax : +1-408-727-4842)
E-mail : christophere399@klsupply.com

Tool No. 90890-	Tool name	Usage	Note
YB-42223	Grand nut wrench		
YB-42224	Pinion nut wrench		

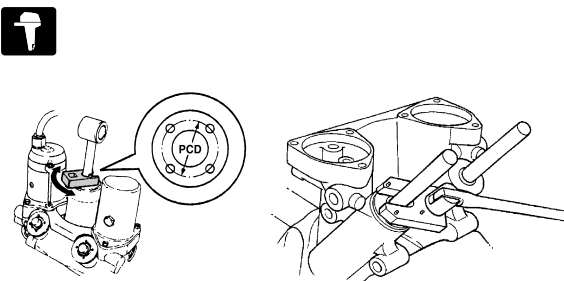
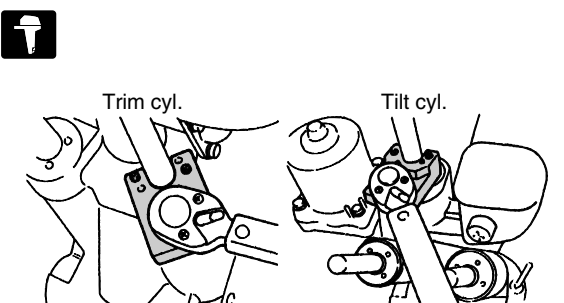
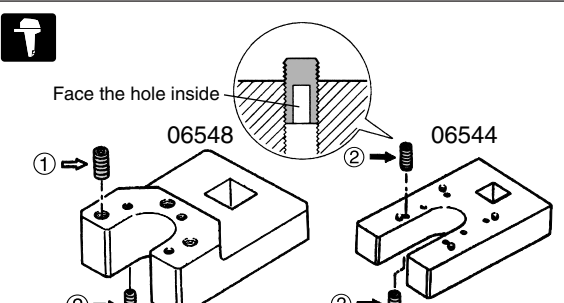
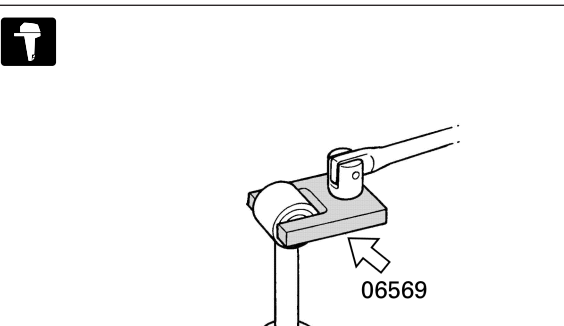
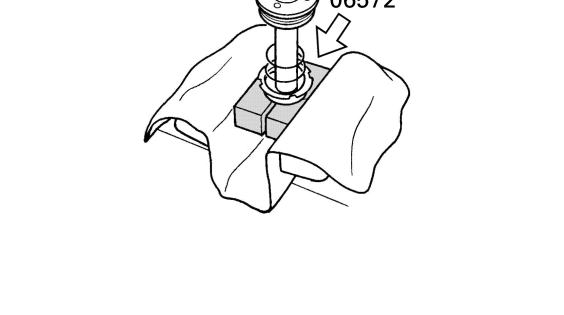
SHIM SELECTION

Tool No. 90890-	Tool name		Usage	Note
06704	Digital caliper			0—150 mm
06701	Shimming plate			L1: 100.0 L2: 20.0 t: 10.0
06710	Pinion height gauge			H: 150
06712	Pinion height gauge plate B			
06703	Pinion height plate			D1: 35.0 D2: 19.0 t: 10.0

TOOL DESCRIPTION

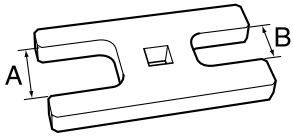
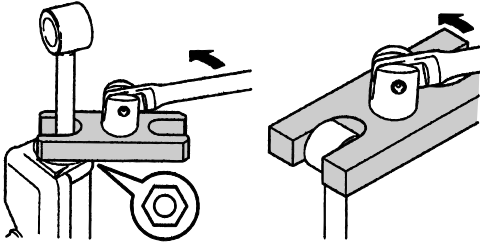
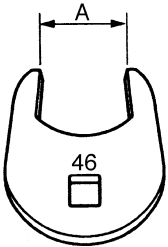
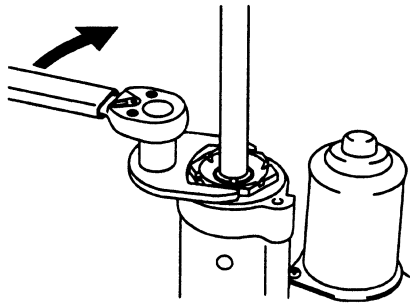
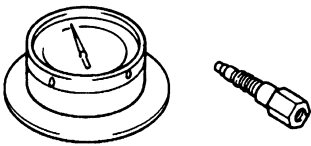
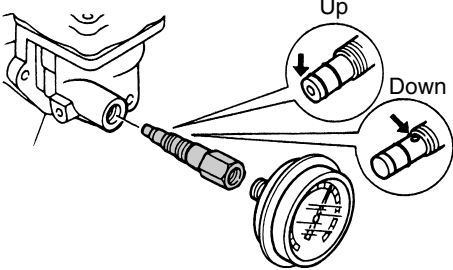
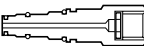
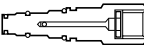
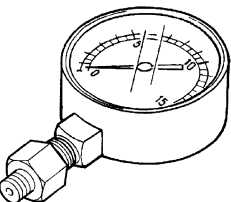
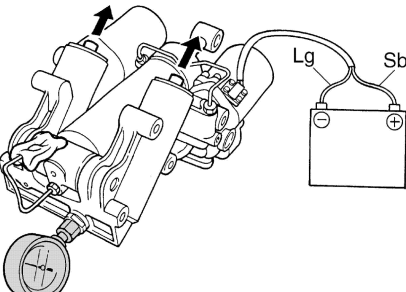
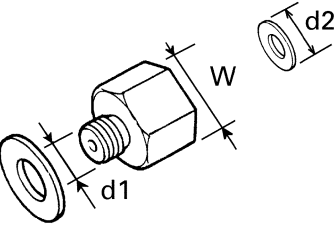
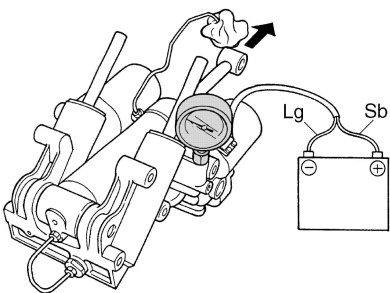
Tool No. 90890-	Tool name	Usage	Note	
01252	Dial gauge set 			
06844	Magnet base B 			
06706	Backlash indicator 			L1: 26.8 L2: 9.0
07003	Magnet base plate 			L1: 200 L2: 80 t: 12 d1: 11.5 d2: 8

PTT TOOL

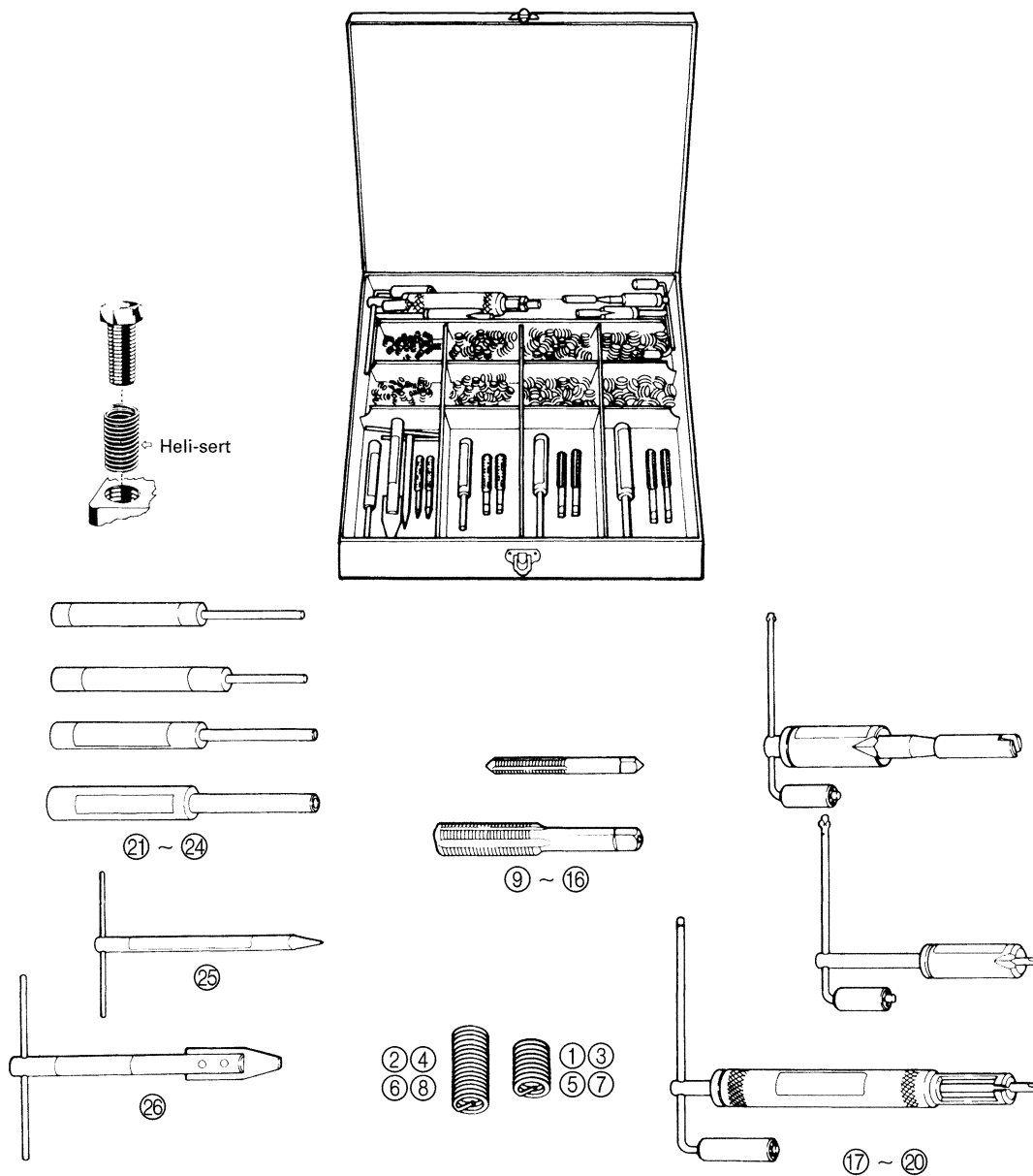
Tool No. 90890-	Tool name	Usage	Note
06568 (06544) *1	Cylinder-end screw wrench (Tilt cylinder wrench-III)		PCD: 1) 28.0 2) 38.0 3) 47.0
06587 (06548) *1	Trim & tilt wrench		PCD M4: 32.0 M6: 35.0
92A08-06312 92A08-04312	Set screw ① for 06548 Set screw ② for 06544 & 06548		① M6 x 12 mm Use with 06548 ② M4 x 12 mm Use with 06544 & 06548
06569	Tilt rod wrench		A: 38
06572	PTT piston vice attachment		D: 45.0 L: 80.0 W: 60.0

*1 Refer to NOTICE page

TOOL DESCRIPTION

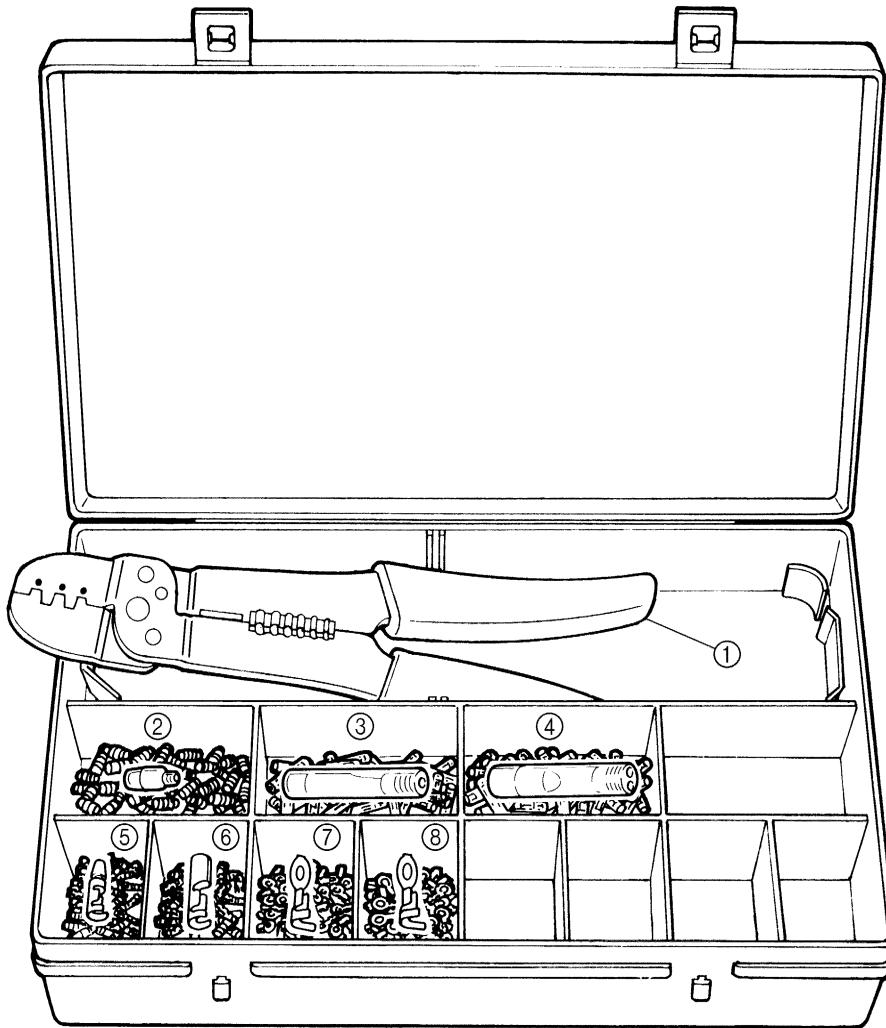
Tool No. 90890-	Tool name	Usage	Note
06560	Power tilt wrench 		A: 35 B: 25.4
06588	PTT wrench 46 		A: 46
06776 06773 06774	Hydraulic pressure gauge [PTToil pressure] Up relief fitting [PTToil pressure] Down relief fitting [PTToil pressure] 		0-16 Mpa 06773:  06774:  Use with 06776
06580	PTT oil pressure gauge assembly 		0-16 Mpa
06581	PTT oil pressure gauge adapter 		d1: N10 x 1.0 W: 19 d2: 9.5

HELI-SERT KIT (90890-05155)



No.	Description	Q'ty	No.	Description	Q'ty	No.	Description	Q'ty
1	Heli-sert M5 x 0.8 x 1.5D	20	10	Tap M5 x 0.8 No.3	1	19	Inserting tool (S-type)	1
2	Heli-sert M5 x 0.8 x 2D	20	11	Tap M6 x 1.0 No.2	1	20	Inserting tool (S-type)	1
3	Heli-sert M6 x 1.0 x 1.5D	20	12	Tap M6 x 1.0 No.3	1	21	Tang break tool M5	1
4	Heli-sert M6 x 1.0 x 2D	20	13	Tap M8 x 1.25 No.2	1	22	Tang break tool M6	1
5	Heli-sert M8 x 1.25 x 1.5D	20	14	Tap M8 x 1.25 No.3	1	23	Tang break tool M8	1
6	Heli-sert M8 x 1.25 x 2D	20	15	Tap M10 x 1.25 No.2	1	24	Tang break tool M10	1
7	Heli-sert M10 x 1.25 x 1.5D	20	16	Tap M10 x 1.25 No.3	1	25	Extracting tool M3-5	1
8	Heli-sert M10 x 1.25 x 2D	20	17	Inserting tool (P-type)	1	26	Extracting tool M6-10	1
9	Tap M5 x 0.8 No.2	1	18	Inserting tool (S-type)	1	27	Tool box	1

MARINE TERMINAL KIT (90890-05354)

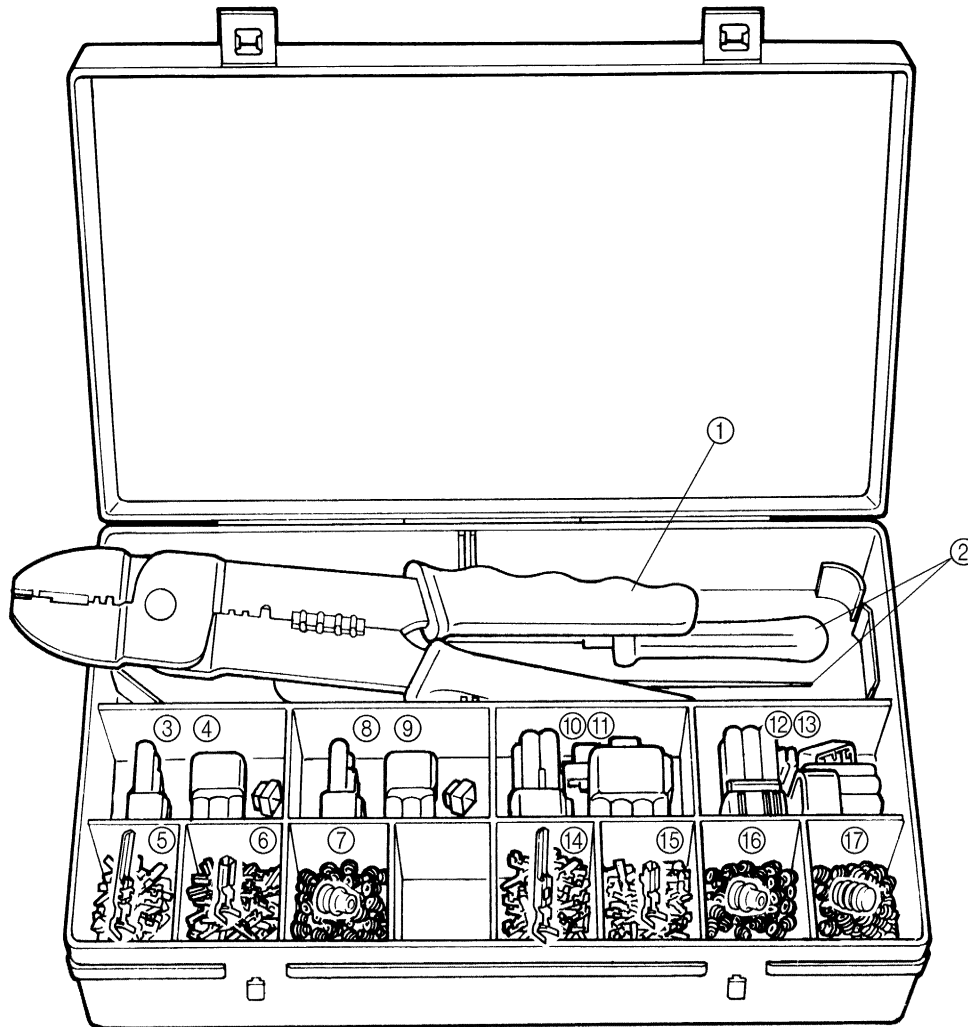


No.	Name	Note	Q'ty
1	Crimper		1
2	Sleeve, plug	for round plug	20
3	Sleeve, socket	for round socket	20
4	Sleeve, socket	for 2 wires	20
5	Round plug	Galvanized	20
6	Round socket	Galvanized	20
7	Eye terminal	for 5 mm screw	20
8	Eye terminal	for 4 mm screw	20

REPLENISHMENTS

No.	Name	P/No.	Order Q'ty	Piece(s)
1	Crimper	90890-05357	1	1
2	Sleeve, plug	9E312-00617	1	100
3	Sleeve, socket	9E312-10735	1	100
4	Sleeve, socket	9E312-20735	1	20
5	Round plug	9E212-10400	1	100
6	Round socket	9E212-11400	1	100
7	Eye terminal	9E110-10510	1	100
8	Eye terminal	90890-05207	1	100


COUPLER KIT A(61A) (90890-05353)



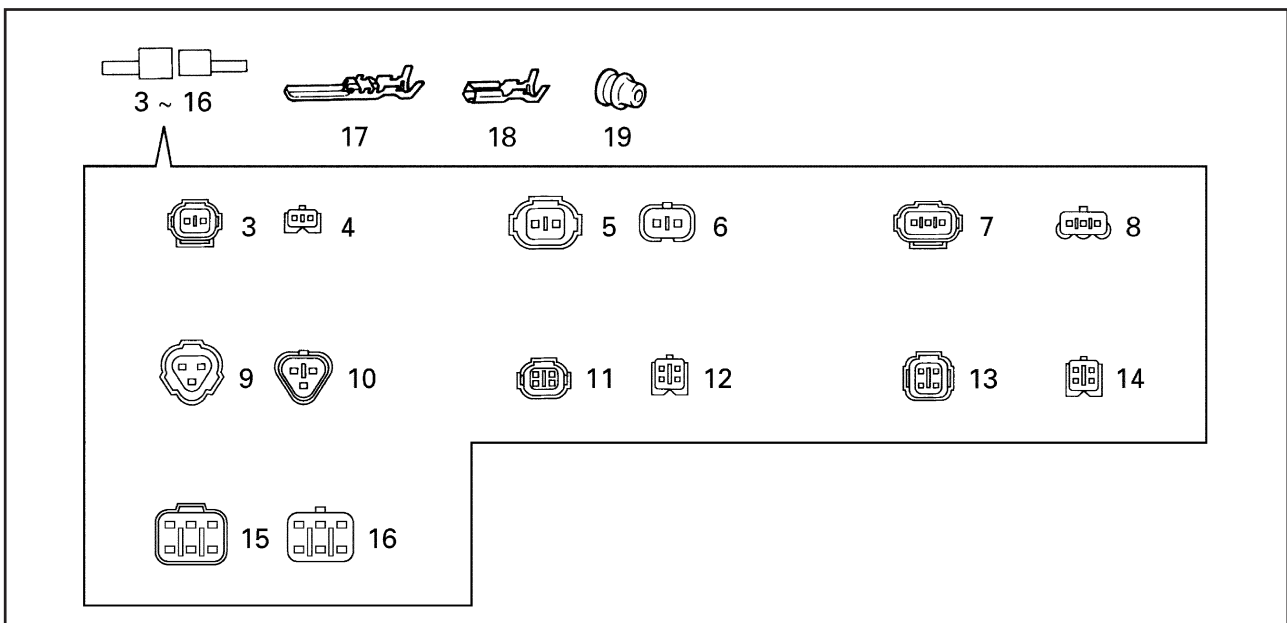
No.	Name	Note	Q'ty
1	Crimper		1
2	Terminal pick	2 types in 1 set	1
3	Coupler housing	2P, Male (Water craft, Start SW)	1
4	Coupler housing	2P, Female (Water craft, Start SW)	1
5	Terminal, male	for Watercraft	20
6	Terminal, female	for Watercraft	20
7	Grommet	for Watercraft	40
8	Coupler housing	2P, Male (Outboard Motor)	1
9	Coupler housing	2P, Female (Outboard Motor)	1
10	Coupler housing	3P, Male (Outboard Motor)	1
11	Coupler housing	3P, Female (Outboard Motor)	1
12	Coupler housing	4P, Male (Outboard Motor)	1
13	Coupler housing	4P, Female (Outboard Motor)	1
14	Terminal, male	for Outboard Motor	20
15	Terminal, female	for Outboard Motor	20
16	Grommet	for Outboard Motor	40
17	Plug	for Outboard Motor	20

OPTIONAL PARTS

Common use

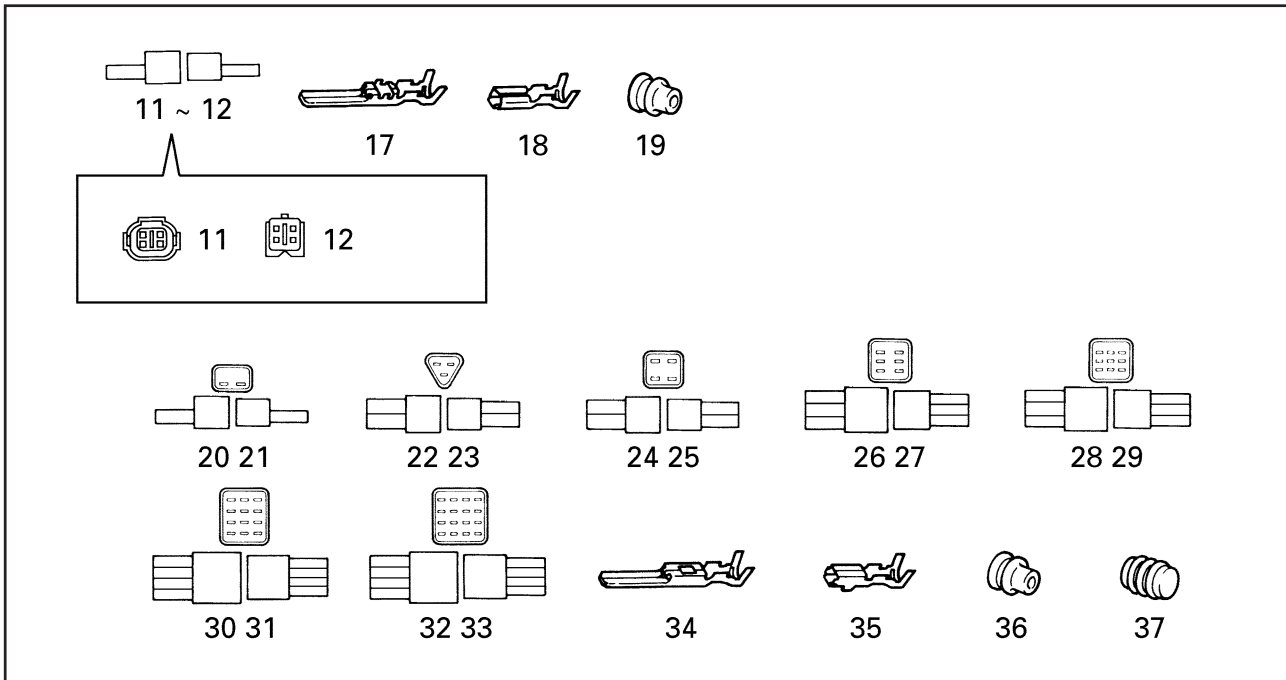
						
No.	Name	Specification	P/No.	Order Q'ty	Piece(s)	Note
1	Crimper coupler (61A)		90890-05356	1	1	
2	Terminal pick (61A)		90890-05361	1	1	2 types in 1 set

Watercraft



No.	Name	Specification	P/No.	Order Q'ty	Piece(s)	Note
3	Coupler housing	2P, Male, White	9E450-02433	1	10	Start sw.-harness
		2P, Male, Black	9E451-02433	1	10	Stop sw.-harness
4	Coupler housing	2P, Female, White	9E450-02533	1	10	Start sw.-harness
		2P, Female, Black	9E451-02533	1	10	Stop sw.-harness
5	Coupler housing	2P, Male, White	9E470-02413	1	10	Oil level gauge
6	Coupler housing	2P, Female, White	9E470-02513	1	5	Oil level gauge
7	Coupler housing	3P, Male, White	9E450-03433	1	10	Charge coil-CDI
		3P, Male, Black	9E451-03433	1	10	Pulser coil-CDI
8	Coupler housing	3P, Female, White	9E450-03533	1	10	Charge coil-CDI
		3P, Female, Black	9E451-03533	1	10	Pulser coil-CDI
9	Coupler housing	3P, Male, White	9E470-03413	1	5	Speed sensor
10	Coupler housing	3P, Female, White	9E470-03513	1	5	Speed sensor
11	Coupler housing	4P, Male, White	9E450-04433	1	5	Oil level gauge, trim gauge and remote oil tank
12	Coupler housing	4P, Female, White	9E450-04533	1	5	
13	Coupler housing	4P, Male, White	9E470-04413	1	5	Meter unit-harness
14	Coupler housing	4P, Female, White	9E470-04513	1	5	Meter unit-harness
15	Coupler housing	6P, Male, White	9E450-06433	1	5	(64T)
16	Coupler housing	6P, Female, White	9E450-06523	1	5	(64T)
17	Terminal, male		9E212-10303	1	50	for above #3 -#16
18	Terminal, female		9E212-11303	1	50	
19	Grommet		9E322-90606	1	50	

Outboard motor



No.	Name	Specification	P/No.	Order Q'ty	Piece(s)	Note
11	Coupler housing	4P, Male, White	9E450-04433	1	5	Oil level gauge, trim gauge and remote oil tank
12	Coupler housing	4P, Female, White	9E450-04533	1	5	
17	Terminal, male		9E212-10303	1	50	for above #11 & #12
18	Terminal, female		9E212-11303	1	50	
19	Grommet		9E322-90606	1	50	
20	Coupler housing	2P, Male, White	9E470-02205	1	10	
		2P, Male, Black	9E471-02205	1	10	
21	Coupler housing	2P, Female, White	9E470-02305	1	10	
		2P, Female, Black	9E471-02305	1	10	
22	Coupler housing	3P, Male, Black	9E471-03205	1	10	
23	Coupler housing	3P, Female, Black	9E471-03305	1	10	
24	Coupler housing	4P, Male, Black	9E471-04205	1	5	
25	Coupler housing	4P, Female, Black	9E471-04305	1	5	
26	Coupler housing	6P, Male, Black	9E471-06205	1	5	
27	Coupler housing	6P, Female, Black	9E471-06305	1	5	
28	Coupler housing	9P, Male, Black	9E471-09205	1	5	
29	Coupler housing	9P, Female, Black	9E471-09305	1	5	
30	Coupler housing	12P, Male, Black	9E471-12205	1	5	
31	Coupler housing	12P, Female, Black	9E471-12305	1	5	
32	Coupler housing	16P, Male, Black	9E471-16205	1	5	
33	Coupler housing	16P, Female, Black	9E471-16305	1	5	
34	Terminal, male		9E212-12005	1	50	for above #20-#33
35	Terminal, female		9E212-13005	1	50	
36	Grommet		9E322-E0506	1	50	
37	Plug		9E322-F0607	1	50	for empty terminal

INDEX

N:New tool

Tool No.	Tool name	Table page No.	Illust page No.
90890-01080	Rotor puller	1-27, 28	2-10
01235	Rotor holder	1-5 ~ 8, 29, 30	2-9
01252	Dial gauge set	1-1 ~ 4, 23 ~ 28	2-3, 2-30
01399	Special thickness gauge	—	2-5
01426	Oil filter wrench 64	1-9, 29, 30	2-13
01601	Test propeller (646)	1-11, 12	2-18
01609	Test propeller (647)	1-11, 12	2-18
01611	Test propeller (663)	1-11, 12	2-18
01613	Test propeller (664)	1-11, 12	2-18
01618	Test propeller (676)	1-11, 12	2-18
01619	Test propeller (683)	1-11, 12	2-18
01620	Test propeller (688)	1-11, 12	2-18
01621	Test propeller (689)	1-11, 12	2-18
01624	Test propeller (6E5)	1-11, 12	2-18
01625	Test propeller (6G1)	1-11, 12	2-18
01626	Test propeller (6G5)	1-11, 12	2-18
01627	Test propeller (6G8)	1-11, 12	2-18
01629	Test propeller (61N)	1-11, 12	2-18
01630	Test propeller (6L5)	1-11, 12	2-18
01631	Test propeller (6L6)	1-11, 12	2-18
01701	Sheave holder	1-5 ~ 8, 29, 30	2-10
02351	• Flange	1-13, 14	2-17
02352	• Body	1-13, 14	2-17
02353	• Bolt	1-13, 14	2-17
02354	• Washer	1-13, 14	2-17
02355	• Bushing-1 (D15)	1-13, 14	2-17
02357	• Bushing-3 (D20)	1-13, 14	2-17
02358	• Bushing-4 (D22)	1-13, 14	2-17
02359	• Bushing-5 (D25)	1-13, 14	2-17
02361	• Bushing-7 (D29)	1-13, 14	2-17
02363	• Bushing-9 (D30)	1-13, 14	2-17
02365	• Bushing-11(B11)	1-13, 14	2-17
02366	• Bushing-12 (D35)	1-13, 14	2-17
02367	• Height ring-1 (H28)	1-13, 14	2-17
02369	• Height-ring-3 (H40)	1-13, 14	2-17
02371	• Height ring-5 (H47)	1-13, 14	2-17
02376	• Height ring-10 (H53)	1-13, 14	2-17
02377	• Height ring(H54)	1-13, 14	2-17
02379	• Height ring-13 (H57)	1-13, 14	2-17
02384	• Pressure plate	1-13, 14	2-17
02385	• Press body	1-13, 14	2-17
02386	• Plate A	1-13, 14	2-17
02387	• Plate B	1-13, 14	2-17
02388	• Bolt	1-13, 14	2-17
02389	• Pressure pin A	1-13, 14	2-17
02390	• Pressure pin B	1-13, 14	2-17
02391	• Bearing pressure A	1-13, 14	2-17
02392	• Bearing pressure B	1-13, 14	2-17
02393	• Bearing pressure C	1-13, 14	2-17

Tool No.	Tool name	Table page No.	Illust page No.	
90890-02394	• Support	1-13, 14	2-17	*
02395	• Spacer A	1-13, 14	2-17	*
02396	• Spacer B	1-13, 14	2-17	*
02399	• Bushing-13 (D20)	1-13, 14	2-17	*
02401	• Height ring (E40G/J)	1-13, 14	2-17	*
02402	• Plate C	1-13, 14	2-17	*
02403	• Pressure pin C	1-13, 14	2-17	*
02404	• Spacer C	1-13, 14	2-17	*
02407	• Nut	1-13, 14	2-17	*
02408	• Pressure plate	1-13, 14	2-17	*
02409	• Pole	1-13, 14	2-17	*
02410	• Plate A	1-13, 14	2-17	*
02411	• Plate B	1-13, 14	2-17	*
02412	• Guide	1-13, 14	2-17	*
02413	• Guide plate	1-13, 14	2-17	*
02414	• Guide pole	1-13, 14	2-17	*
02415	• Base	1-13, 14	2-17	*
02416	Disassembling kit	1-13, 14	2-17	*
02417	Assembling kit	1-13, 14	2-17	*
02418	Crank separator kit (set 02416 + 02417)	1-13, 14	2-17	*
02419	• Bushing 14 (E25A/25V)	1-13, 14	2-17	*
02422	Crank shaft jig set	1-13, 14	2-17	*
03006	Outside micrometer 0 - 25	1-1 ~ 4, 27, 28	2-4	*
03007	Outside micrometer 25 - 50	1-1 ~ 4, 27, 28	2-4	*
03008	Outside micrometer 50 - 75	1-1 ~ 4, 27, 28	2-4	*
03009	Outside micrometer 75 - 100	1-1 ~ 4, 27, 28	2-4	*
03010	Inside micrometer 5 - 25	1-1 ~ 4, 27, 28	2-4	*
03016	Cylinder gauge 35 - 60	1-1 ~ 4	2-4	
03060	• Attachment	1-5 ~ 8, 29, 30	2-3	
03094	Vacuum gauge [Selector type]	1-5 ~ 8, 29, 30	2-3	
03107	Crankshaft alingner	1-1 ~ 4	2-4	*
03112	Pocket tester	1-1 ~ 4, 27, 28	2-5	
03141	Timing light	1-1 ~ 4	2-1	
03159	Vacuum gauge	1-5 ~ 8	2-3	
03160	Compression gauge	1-1 ~ 4, 27, 28	2-1	
03172	Peak voltage adapter B	1-1 ~ 4, 27, 28	2-5, 2-7	
03174	Digital circuit tester	1-1 ~ 4, 27, 28	2-5, 2-7	
03180	Thickness gauge	1-1 ~ 4, 27, 28	2-5	
04015	Valve guide installer 5.6	1-9	2-14	*
04019	Valve spring compressor	1-9, 29, 30	2-13	
04064	Valve guide remover/installer 5.9	1-9	2-14	
04066	Valve guide reamer 6.0	1-9	2-14	
04086	Universal clutch holder	1-5 ~ 8	2-9	
04101	Valve lapper	1-9	2-14	
04108	Valve spring compressor attachment	1-9, 29, 30	2-13	
04111	Valve guide remover 4.0	1-29, 30	2-14	
04112	Valve guide installer 4.0	1-29, 30	2-14	
04113	Valve guide reamer 4.0	1-29, 30	2-14	
04114	Valve spring compressor attachment	1-29, 30	2-13	
04116	Valve guide remover 4.5	1-29, 30	2-14	
04117	Valve guide installer 4.5	1-29, 30	2-14	

Tool No.	Tool name	Table page No.	Illust page No.
90890-04118	Valve guide reamer 4.5	1-29, 30	2-14
05041	Tap handle (5-6)	1-9	2-14
05155	Heli-sert kit A	3-1	3-1
05158	Piston ring compressor	1-5 ~ 8, 29, 30	2-8
05353	Coupler kit A (61A)	3-3	3-3
05354	Marine terminal kit	3-2	3-2
05356	Crimper coupler (61A)	3-4	3-4
05357	Crimper	3-2	3-2
05361	Terminal pick (61A)	3-4	3-4
06052	Shift rod push arm	1-17, 18, 21, 22	2-24
06069	Shaft holder	1-5 ~ 8, 29, 30	2-10
06312	Valve seat cutter 45°-27.5	1-9, 10, 29, 30	2-15
06313	Valve seat cutter 5°-25	1-9, 10	2-15
06314	Valve seat cutter 5°-29	1-9, 10, 29, 30	2-15
06315	Valve seat cutter 60°-26	1-9, 10, 29, 30	2-15
06316	Valve seat cutter holder ø5.5	1-9, 10	2-15
06320	Valve spring compressor attachment	1-9	2-13
06323	Valve seat cutter 60°-31	1-9, 10	2-15
06324	Valve seat cutter 60°-36	1-9, 10	2-15
06325	Valve seat cutter 45°-35	1-9, 10	2-15
06326	Valve seat cutter 30°-32.5	1-9, 10	2-15
06327	Valve seat cutter 30°-35	1-9, 10	2-15
06328	Valve seat cutter 30°-27	1-9, 10, 29, 30	2-15
06355	Crankshaft holder 16	1-5 ~ 8	2-10
06425	Coupler wrench	1-27 ~ 30	2-16
06501	Stopper guide plate	1-15, 16, 19, 20, 29, 30	2-19
06502	Bearing housing puller claw L	1-15, 16, 19, 20	2-19
06503	Bearing housing puller claw M	1-15, 16, 19, 20	2-19
06504	Center bolt	1-15, 16, 19, 20	2-19
06505	Pinion nut holder	1-15, 16, 19, 20	2-20
06506	• Socket adapter 1	1-15, 16, 19, 20	2-20
06507	• Socket adapter 2	1-15, 16, 19, 20	2-20
06508	• Socket adapter 3	1-15, 16, 19, 20	2-20
06509	Ring nut wrench 1	1-15, 16, 19, 20	2-19
06510	Ring nut wrench 2	1-15, 16, 19, 20	2-19
06511	Ring nut wrench 3	1-15, 16, 19, 20	2-19
06512	Ring nut wrench 4	1-15, 16, 19, 20	2-19
06513	Ring nut wrench extension	1-15, 16, 19, 20	2-19
06514	Puller head	1-15, 16, 19, 20	2-21
06515	Drive shaft holder 1	1-15, 16, 19, 20	2-20
06516	Drive shaft holder 2	1-15, 16, 19, 20	2-20
06517	Drive shaft holder 3	1-15, 16, 19, 20	2-20
06518	Drive shaft holder 4	1-15, 16, 19, 20, 29, 30	2-20
06519	Drive shaft holder 5	1-15, 16, 19, 20, 29, 30	2-20
06520	Drive shaft holder 6	1-15, 16, 19, 20	2-20
06521	Flywheel puller	1-5 ~ 8, 15, 16, 19, 20, 27, 28	2-8
06522	Flywheel holder	1-5 ~ 8, 27, 28	2-8
06523	Bearing outer race puller assembly	1-5 ~ 8, 15, 16, 19, 20, 29, 30	2-21
06524	Small end bearing installer	1-5 ~ 8	2-8
06525	Small end bearing installer	1-5 ~ 8	2-8
06526	Small end bearing installer	1-5 ~ 8	2-8

Tool No.	Tool name	Table page No.	Illust page No.
90890-06527	Small end bearing installer	1-5 ~ 8	2-8
06528	Small end bearing installer	1-5 ~ 8	2-8
06529	Piston slider ø70	1-5 ~ 8	2-8
06530	Piston slider ø85	1-5 ~ 8	2-8
06531	Slide hammer handle	1-15, 16, 19, 20, 29, 30	2-21
06532	• Outer race puller claw A	1-15, 16, 19, 20	2-21
06533	Outer race puller claw B	1-15, 16, 19, 20	2-21
06534	Bearing separator	1-5 ~ 8, 15, 16, 19, 20, 27, 28	2-9, 2-20
06535	Bearing puller assembly	1-15, 16, 19, 20, 29, 30	2-22
06536	• Bearing puller claw 1	1-15, 16, 19, 20, 29, 30	2-22
06537	• Bearing puller claw 2	1-15, 16, 19, 20	2-22
06538	Stopper guide stand	1-15, 16, 19, 20, 29, 30	2-22
06540	Gear puller	1-5, ~ 8, 15, 16, 19, 20	2-24
06543	Small end bearing installer	1-5 ~ 8	2-8
06544	Cylinder-end screw wrench	1-23 ~ 26	2-31
06546	Coupler wrench	1-27 ~ 30	2-16
06548	Trim & tilt wrench	1-24 ~ 26	2-31
06550	Flywheel holder	1-27, 28	2-16
06551	Coupler wrench	1-27 ~ 30	2-16
06552	Crankshaft holder 20	1-5 ~ 8, 29, 30	2-10
06553	Valve seat cutter holder ø6.0	1-9, 10	2-15
06555	Valve seat cutter 45°-30	1-9, 10	2-15
06560	Power tilt wrench	1-23 ~ 26	2-32
06561	Crankshaft holder 12	1-5 ~ 8	2-10
06562	Crankshaft holder 18	1-5 ~ 8	2-10
06563	Compression gauge extension M14	1-1 ~ 4	2-1
06564	Bearing housing puller claw S	1-15, 16, 19, 20	2-19
06565	Drive shaft holder 7	1-15, 16, 19, 20	2-20
06568	Cylinder-end screw wrench	1-23 ~ 26	2-31
06569	Tilt rod wrench	1-23 ~ 26	2-31
06572	PTT piston vice attachment	1-23 ~ 26	2-31
06578	Ring nut wrench	1-15, 16, 19, 20	2-19
06580	PTT oil pressure gauge assembly	1-23 ~ 26	2-32
06581	PTT oil pressure gauge adapter	1-23 ~ 26	2-32
06582	Compression gauge extension M10	1-27, 28	2-1
06583	• Dial gauge stand 173	1-27, 28	2-3
06584	• Dial gauge needle 173	1-27, 28	2-3
06585	Dial gauge stand set	1-27, 28	2-3
06586	Shaft holder	1-29, 30	2-16
06587	Trim & tilt wrench	1-23 ~ 26	2-31
06588	PTT wrench 46	1-23 ~ 26	2-32
06590	• Height ring 640 (H-19)	1-13, 14	2-17
06601	Bushing installer center bolt	1-15, 16, 19, 20	2-24
06602	Driver rod SL	1-15, 16, 19, 20, 29, 30	2-23
06603	Bearing depth plate	1-15, 16, 19, 20	2-24
06604	Driver rod SS	1-15, 16, 19, 20	2-23
06605	Driver rod LL	1-15, 16, 19, 20, 29, 30	2-23
06606	Driver rod LS	1-5 ~ 8, 15, 16, 19, 20, 27 ~ 30	2-9, 23
06607	Needle bearing attachment	1-15, 16, 19, 20	2-25
06608	Needle bearing attachment	1-15, 16, 19, 20	2-25

Tool No.	Tool name	Table page No.	Illust page No.
90890-06609	Needle bearing attachment	1-15, 16, 19, 20	2-25
06610	Needle bearing attachment	1-15, 16, 19, 20	2-25
06611	Needle bearing attachment	1-15, 16, 19, 20, 29, 30	2-25
06612	Needle bearing attachment	1-15, 16, 19, 20	2-25
06613	Needle bearing attachment	1-5 ~ 8, 15, 16, 19, 20, 29, 30	2-25
06614	Needle bearing attachment	1-15, 16, 19, 20, 29, 30	2-25
06615	Needle bearing attachment	1-15, 16, 19, 20	2-25
06616	Needle bearing attachment	1-15, 16, 19, 20	2-25
06617	Needle bearing attachment	1-17, 18, 21, 22	2-26
06618	Needle bearing attachment	1-17, 18, 21, 22	2-26
06619	Bearing outer race attachment	1-17, 18, 21, 22	2-28
06620	Bearing outer race attachment	1-17, 18, 21, 22	2-28
06621	Bearing outer race attachment	1-17, 18, 21, 22	2-28
06622	Bearing outer race attachment	1-17, 18, 21, 22	2-28
06623	Bearing outer race attachment	1-5 ~ 8, 17, 18, 21, 22	2-28
06624	Bearing outer race attachment	1-5 ~ 8, 17, 18, 21, 22, 27, 28	2-28
06625	Bearing outer race attachment	1-17, 18, 21, 22, 29, 30	2-28
06626	Bearing outer race attachment	1-5 ~ 8, 17, 18, 21, 22, 27 ~ 30	2-28
06627	Bearing outer race attachment	1-17, 18, 21, 22	2-28
06628	Bearing outer race attachment	1-17, 18, 21, 22	2-28
06629	Ball bearing attachment	1-17, 18, 21, 22	2-27
06630	Ball bearing attachment	1-5 ~ 8, 17, 18, 21, 22	2-27
06631	Ball bearing attachment	1-5 ~ 8, 17, 18, 21, 22, 29, 30	2-26
06632	Ball bearing attachment	1-17, 18, 21, 22	2-26
06633	Ball bearing attachment	1-17, 18, 21, 22	2-26
06634	Ball bearing attachment	1-17, 18, 21, 22, 29, 30	2-26
06635	Ball bearing attachment	1-5 ~ 8, 17, 18, 21, 22	2-26
06636	Ball bearing attachment	1-17, 18, 21, 22, 29, 30	2-26
06637	Ball bearing attachment	1-5 ~ 8, 17, 18, 21, 22	2-26
06638	Ball bearing attachment	1-17, 18, 21, 22, 29, 30	2-26
06639	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22	2-12, 2-27
06640	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22	2-12, 2-27
06641	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22	2-12, 2-27
06642	Bearing inner race attachment	1-17, 18, 21, 22	2-12, 2-27
06643	Bearing inner race attachment	1-17, 18, 21, 22	2-12, 2-27
06644	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22	2-12, 2-27
06645	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22	2-12, 2-27
06646	Bushing puller center bolt	1-17, 18, 21, 22	2-22
06648	Bushing puller spacer	1-17, 18, 21, 22	2-22
06649	Bushing attachment	1-17, 18, 21, 22	2-25
06650	Bushing attachment	1-17, 18, 21, 22	2-25
06651	Bushing attachment	1-17, 18, 21, 22	2-25
06652	Driver rod L3	1-5 ~ 8, 17, 18, 21, 22, 29, 30	2-23
06653	Needle bearing attachment	1-17, 18, 21, 22, 29, 30	2-25
06654	Needle bearing attachment	1-5 ~ 8, 17, 18, 21, 22	2-25
06655	Ball bearing attachment	1-5 ~ 8, 17, 18, 21, 22	2-26
06656	Ball bearing attachment	1-17, 18, 21, 22	2-27
06657	Ball bearing attachment	1-17, 18, 21, 22, 29, 30	2-27
06658	Bearing outer race attachment	1-17, 18, 21, 22	2-28
06659	Bearing inner race attachment	1-17, 18, 21, 22	2-12, 2-27

*

Tool No.	Tool name	Table page No.	Illust page No.
90890-06660	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22	2-12, 2-27
06661	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22	2-12, 2-27
06662	Bearing inner race attachment	1-5 ~ 8, 17, 18, 21, 22, 29, 30	2-12, 2-27
06663	Ball bearing attachment	1-5 ~ 8	2-9
06701	Shimming plate	1-23 ~ 26	2-29
06703	Pinion height plate	1-23 ~ 26	2-29
06704	Digital caliper	1-1 ~ 4, 23 ~ 30	2-3, 2-29
06706	Backlash indicator	1-23 ~ 26	2-30
06710	Pinion height gauge	1-23 ~ 26	2-29
06711	•Pinion height gauge plate A	1-23 ~ 26	2-29
06712	Pinion height gauge plate B	1-23 ~ 26	2-29
06715	Pinion nut holder	1-15, 16, 19, 20	2-20
06754	Ignition tester	1-1 ~ 4, 27, 28	2-1
06756	Vacuum/pressure pump gauge set	1-1 ~ 4, 27 ~ 30	2-2
06757	Throttle sensor adjusting lead FWY-3	1-1 ~ 4	2-6, 2-7
06759	Cylinder gauge 50 - 100	1-1 ~ 4, 27, 28	2-4
06760	Digital tachometer	1-1 ~ 4, 27, 28	2-1
06767	Test harness FWY-2	1-1 ~ 4, 27, 28	2-7
06768	Test harness EJ-II-2	1-1 ~ 4	2-7
06769	Test harness EJ-II-3	1-1 ~ 4, 27, 28	2-7
06770	Test harness SMT250-3	1-1 ~ 4, 27, 28	2-7
06771	Test harness FWY-4	1-1 ~ 4, 27 ~ 30	2-7
06772	Test harness FWY-6	1-1 ~ 4	2-7
06773	Up relief fitting	1-23 ~ 26	2-32
06774	Down relief fitting	1-23 ~ 26	2-32
06775	Test harness AMP-4	1-1 ~ 4	2-7
06776	Hydraulic pressure gauge	1-23 ~ 26	2-32
06777	Test harness HM090-3	1-27, 28	2-7
06778	Test harness 090-4	1-27, 28	2-7
06779	Test harness FWY-8	1-1 ~ 4, 27, 28	2-7
06780	Test harness SMT618-6	1-27, 28	2-7
06785	Mouth feel rubber	—	2-2
06786	Fuel pressure gauge	1-1 ~ 4, 27, 28	2-2
06787	Test harness FW13613-2	1-1 ~ 4	2-7
06788	Test harness FW13613-1	1-1 ~ 4	2-7
06790	Test harness FSW-6	1-1 ~ 4, 27, 28	2-7
06791	Test harness FWY-3-L	1-1 ~ 4, 27, 28	2-7
06792	Test harness SMHW090-2	1-1 ~ 4, 27, 28	2-7
06793	Test harness SMHW099-3	1-1 ~ 4, 27, 28	2-7
06801	Valve guide remover/installer 5.4	1-9	2-14
06802	Valve guide installer 5.4	1-9	2-14
06804	Valve guide reamer 5.5	1-9	2-14
06810	Valve guide installer 5.5	1-9	2-14
06811	Valve seat cutter holder ø4.0	1-29, 30	2-15
06812	Valve seat cutter holder ø4.5	1-29, 30	2-15
06813	Valve seat cutter 60°-22	1-29, 30	2-15
06814	Valve seat cutter 45°-24	1-29, 30	2-15
06815	Valve seat cutter 30°-26	1-29, 30	2-15
06830	Oil filter wrench 72.5	1-9	2-13

*

*

Tool No.	Tool name	Table page No.	Illust page No.	
90890-06840	Leakage tester	1-1 ~ 4	2-2	
06842	Fuel pressure gauge adapter	1-27, 28	2-2	
06843	Piston slider ø58	1-5 ~ 8	2-8	
06844	Magnet base B	1-23 ~ 26	2-4, 2-30	
06846	Test harness QLW-3	1-1 ~ 4	2-7	
06847	Test harness QLWD-3	1-1 ~ 4	2-7	
06848	Test harness FSW-6A	1-1 ~ 4, 27, 28	2-7	
06849	Test harness SM6195021-6	1-27, 28	2-7	
06857	Throttle sensor adjusting lead FWY-3	1-1 ~ 4	2-7	
06861	Test harness SM6195043	1-1 ~ 4	2-7	
06862	Test connector FMY-8	1-27, 28	2-6	
06864	Diagnostic flash adapter 4	1-1 ~ 4	2-6	
06865	Diagnostic flash indicator B	1-1 ~ 4	2-6	
06867	Test harness FWY-2	1-1 ~ 4, 27, 28	2-7	
06868	Test harness EJ-II-2	1-1 ~ 4	2-7	
06869	Test harness EJ-II-3	1-1 ~ 4	2-7	
06870	Test harness SMT250-3	1-1 ~ 4, 27, 28	2-7	
06871	Test harness FWY-4	1-1 ~ 4, 27, 28	2-7	
06872	Test harness FWY-6	1-1 ~ 4	2-7	
06875	Test harness AMP-4	1-1 ~ 4	2-7	
06877	Test harness HM090-3	1-27, 28	2-7	
06878	Test harness 090-4	1-27, 28	2-7	
06879	Test harness FWY-8	1-27, 28	2-7	
06880	Test harness SMT618-6	1-27, 28	2-7	
06887	Test harness FW13613-2	1-1 ~ 4	2-7	
06888	Test harness FW13613-1	1-1 ~ 4	2-7	
06901	•Bolt M8 x 34	—	2-8	
06902	•Bolt M6 x 24	—	2-8	
N 06942	Fuel pressure gauge adapter B	1-1 ~ 4	2-2	
06991	Injector grease	1-5 ~ 8	2-11	
07003	Magnet base plate	1-23 ~ 26	2-30	
G1	Deep socket 1 (30 x 100)	1-5 ~ 8	2-11	*
G2	Deep socket 2 (36 x 100)	1-5 ~ 8	2-11	*
G3	Deep socket 3 (41 x 100)	1-5 ~ 8	2-11	*
G4	Deep socket 4 (46 x 100)	1-5 ~ 8	2-11	*
G5	T-type TORX socket T55	1-5 ~ 8	2-11	*
G6	E-type TORX socket T10	1-5 ~ 8	2-11	*
G7	TORX tamper resistant driver T20	1-5 ~ 8	2-11	*
G8	TORX tamper resistant driver T25	1-5 ~ 8	2-11	*
YB-42223	Gland nut wrench	1-17, 18, 21, 22	2-28	*
YB-42224	Pinion nut wrench	1-17, 18, 21, 22	2-28	*
60V-85300-02	Yamaha Diagnostic System (KIT)	1-1 ~ 4, 1-27, 28	2-6	*
60V-WS853-02	Yamaha Diagnostic System (CD-ROM)	1-1 ~ 4, 1-27, 28	2-6	*

-MEMO-



Printed in Japan
Aug. 2004 – 4,5 X 1 YEC
(E, F, ES)

Printed on recycled paper