

# کنترل پروژه تعمیرات اساسی واحد ۳



ID	Task Name
۱	<b>ET0-TRANSFORMERS</b>
۲	START
۳	<b>GEN. TRANSFORMER PROPER</b>
۴	<b>PREP.</b>
۵	SCAF. AROUND MAIN TRANSFORMER
۶	<b>check and fix oil leakage from main trans ۲۲۰/۱۹ kv - ۳۱۲۰۵ mva</b>
۷	check and fix oil leakage of trans should be performed before trans overhaul
۸	if necessary site inspection
۹	number of flange for fixing oil leakage max ۱۵ : NO
۱۰	۲۰۰۰ liter oil drain in clean oil storage tank
۱۱	supply of gasket and oil storage tank by contractor
۱۲	after fixing oil leakage- leakage test with nitrogen gas for at least ۲۴ hours if any leakage fix it and again leakage test
۱۳	oil injection under vacume , oil circulating
۱۴	before oil cooling , oil sample for break down voltage and moisture test
۱۵	this activity is necessary otherwise total contract will be canceled
۱۶	<b>BREATHER</b>
۱۷	CHECK THE DISCOLORATION OF SILICAGEL IN BREATHER
۱۸	REPLACE SILICAGEL
۱۹	SILICAGEL TANK BOTTOM OIL GLASS CLEANING
۲۰	<b>ELECTRICAL TESTS ON COILES</b>
۲۱	MEASUREMENT OF DYNAMIC RESISTANCE OF TAP CHANGER CURRENT VS TIME GRAPH FOR EACH PHASE AND ANALYSIS OF TEST
۲۲	COILES DC RESISTANCE CHECK ( LV SIDE )
۲۳	COILES DC RESISTANCE CHECK IN ALL TAP , AND RESISTANCE VS TAP POSITION GRAPH FOR EACH PHASE AND ANALYSIS OF TEST
۲۴	RATIO TEST WITH ANALOGUE AMMETER IN ۱۰۰ MA MAXIMUM RANGE
۲۵	COILES INSULATION RESISTANCE CHECK AND PI TEST AND INSULATION RESISTANCE IN TWO DIFFERENT VOLTAGE
۲۶	TAG DELTA AND CAPACITANCE TEST FOR WINDING AND BUSHING BY OMICRON EQUIPMENT
۲۷	<b>OIL TESTS</b>
۲۸	MEASURE DIELECTRIC STRENGTH WITH OIL TESTER ( > ۴۰KV/۲,۵ MM GAP)
۲۹	MEASURE MOISTURE CONTENT IN OIL WITH KARL-FISCHER METHOD ( < ۲۰ PPM) , CLIENT MUST APPROVE SUBCONTRACTOR AND TEST CONDITION , BEFORE UNIT SHUT DOWN
۳۰	MEASURE - OIL GAS CHROMATOGRAPHY , CLIENT MUST APPROVE SUBCONTRACTOR AND TEST CONDITION , BEFORE UNIT SHUT DOWN
۳۱	MEASURE ACID VALUE ( < ۰,۲ MG KOH/G) , INTERFACIAL TENSION (IFT) AND OIL POWER FACTOR , CLIENT MUST APPROVE SUBCONTRACTOR AND TEST CONDITION , BEFORE UNIT SHUT DOWN
۳۲	<b>CONSERVATOR</b>
۳۳	Inspection of all surfaced body transfer oil leakage and repair it
۳۵	OIL GAUGE GLASS OF CONSERVATOR CLEAN UP
۳۶	OIL DRAIN FOR GASKET & O-RING REPLACEMENT IF NECESSARY
۳۷	<b>FANS / PUMPS</b>
۳۸	<b>COOLING FANS</b>
۴۰	MEASURE INSULATION RESISTANCE IMMEDIATELY AFTER STOPPAGE OF FAN WITH A ۵۰۰V MEGGER ( > ۲ M)
۴۱	OBSERVATION OF RUNNING BEARING SOUND & MOTOR VIBRATION ( < ۰,۰۲ MM)
۴۲	DISASSEMBLE , INSPECTION , REPLACEMENT
۴۳	<b>OIL PUMPS</b>
۴۵	MEASURE INSULATION RESISTANCE IMMEDIATELY AFTER STOPPAGE OF PUMP WITH A ۵۰۰V MEGGER ( > ۱۰ M)
۴۶	MEASURE DIFFERENTIAL CURRENT BETWEEN EACH PHASE ( < ۱۰٪)
۴۷	OIL FLOW INDICATOR FOR EACH PUMP
۴۸	OBSERVATION OF RUNNING BEARING SOUND & MOTOR VIBRATION ( < ۰,۰۲ MM)
۴۹	DISASSEMBLE , INSPECTION , REPLACEMENT
۵۷	<b>CONTROL PANEL &amp; TERMINAL BOX &amp; CABLES</b>
۵۸	CHECK THE WATER PROOFNESS OF ALL CONTROL WIRING CONNECTIONS
۵۹	ASCERTAIN THE TIGHTNESS OF ALL CONTROL WIRING CONNECTIONS
۶۰	ALL SWITCHES, LAMPS & ANNUNCIATION FUNCTION CHECK
۶۱	MEASURE INSULATION RESISTANCE OF CABLES WITH ۵۰۰V MEGGER
۶۲	<b>ALARM CHECK</b>
۶۳	AC SUPPLY FAIL
۶۴	FAN MOTOR FAIL
۶۵	OIL TEMP. HIGH

# کنترل پروژه تعمیرات اساسی واحد ۳



ID	Task Name
۶۶	WINDING TEMP. HIGH
۶۷	WINDING TEMP. VERY HIGH
۶۸	OIL FLOW STOP
۶۹	PUMP MOTOR FAIL
۷۰	TR OIL LEVEL LOW
۷۱	OLTC OIL LEVEL LOW
۷۲	PRESS RELIFE DEVICE OPERATE
۷۳	OLTC PRESS HIGH
۷۴	OLTC DRIVE POWER FAILURE
۷۵	<b>OUTSIDE CONNECTIONS</b>
۷۶	CHECK FOR DISCOLORATION
۷۷	ALL CONNECTION BOLT TIGHTENING CHECK
۷۸	POWER CONNECTION ( INPUT & OUTPUT ) TIGHTENING CHECK
۷۹	BUSHING CT OUTPUT CONNECTIONS CHECK
۸۰	BUCHHOLZ RELAY OPERATION CHECK
۸۱	INSPECT OF BUS DUCT
۸۲	<b>RADIATORS</b>
۸۳	CLEANING OF ALL SURFACES
۸۴	REPAINTING OR TOUCH UP NECESSARY SECTIONS
۸۵	<b>SURGE ARRESTER</b>
۸۶	SURFACE POLLUTION CLEANING
۸۷	LEAKAGE CUURENT MEASUREMENT , BEFOR SHUT DOWN OF UNIT , RESISTIVE AND CAPACITIVE COMPONENT MEASURMENT OF LEAKAGE CURRENT WITH ANALOGUE AMMETER WITH ۲ MA MAX RANGE
۸۸	INSULATION RESISTANCE MEASUREMENT
۸۹	<b>FINAL ACTIVITIES</b>
۹۰	REMOVE SCAF. AROUND MAIN TRANSFORMER
۹۱	END
۹۲	<b>GEN.TRANSFORMER . EARTHING SWITCHES</b>
۹۳	<b>SERVICING</b>
۹۴	<b>CONDUCTING PART</b>
۹۵	<b>CONTACT PART</b>
۹۶	CLEAN THE CONTACTING FACE
۹۷	CLEAN SEMI-SPHERICAL PROJECTION SURFACE OF FINGER ROOT
۹۸	BURN-OUT OR DEPOSITION REMOVAL & REMADY ACTION
۹۹	REPLACE CONTACT SPRING, IF NECESSARY
۱۰۰	CLAMPING BOLTS TIGHTENING
۱۰۱	REPLACE ALL DAMAGED PARTS DUE TO THRUST DROP-OFF ,IF IT HAPPENED
۱۰۲	CHECK CONTACT POSITION DISCREPANCY & READJUST , IF NECESSARY
۱۰۳	<b>HINGE PART</b>
۱۰۴	CHECK THE DAMAGE & DEFORMATION & CORROSION OF LAMINATED FLEXIBLE CONDUCTOR
۱۰۵	CARRY OUT NECESSARY REPAIRMENT ,IF THERE IS ISOLATOR SWING
۱۰۶	TERMINAL SCREWS TIGHTENING
۱۰۷	TIGHTEN ALL LOOSE PARTS IF THERE IS ENY RUSTY
۱۰۸	<b>INSULATOR</b>
۱۰۹	CHECK INSULATION RESISTANCE ( > ۲۰۰۰ M)
۱۱۰	REPLACE INSULATOR ,IF NECESSARY
۱۱۱	INSULATOR SURFACE CLEANING
۱۱۲	TIGHTEN INSULATOR MOUNTING BOLTS & NUTS
۱۱۳	<b>BASE</b>
۱۱۴	<b>THRUST BEARING</b>
۱۱۵	CHECK SMOOTH MOVEMENT OF THRUST BEARING
۱۱۶	CLEAN & RUST TREATMENT THE THRUST BEARING
۱۱۷	REPLACE THRUST BEARING IF NECESSARY
۱۱۸	<b>INTER PHASE ROD CONNECTING PIN &amp; INTERPOLE PIPE CONNECTING PIN</b>
۱۱۹	CHECK FOR BENDING IN EACH PIN
۱۲۰	CHECK IF THERE IS ANY BROKEN OR CUTTED PIN
۱۲۱	CHECK FOR BEND IN INTER POLE PIPE
۱۲۲	<b>DRIVE BEARING FOR DRIVING DEVICE</b>
۱۲۳	CHECK SMOOTHLY ROTATING
۱۲۴	REPLACE DRIVE BEARING ,IF NECESSARY
۱۲۵	<b>APPEARANCE OF ISOLATOR</b>
۱۲۶	CHECK IF DEAD CENTER IS KEPT FORMED CORRECTLY

# کنترل پروژه تعمیرات اساسی واحد ۳



ID	Task Name
۱۳۷	<b>TESTS AFTER CHECK &amp; SERVICING</b>
۱۳۸	<b>POWER SWITCHING TEST</b>
۱۳۹	<b>RATED CONTROL VOLTAGE TEST</b>
۱۴۰	<b>CONDUCTING PART</b>
۱۴۱	START
۱۴۲	VISUAL CHECK FOR ANY ABNORMALITY ON OPERATION
۱۴۳	MEASURE THE OPERATING TIME TO MAKE CERTAIN THAT THE UNIT IS NORMAL
۱۴۴	VERIFY THAT THERE IS NO ABNORMALITY IN THE CONTACTING CONDITION AT CLOSING POSITION
۱۴۵	<b>BASE AND DRIVING DEVICE</b>
۱۴۶	BE SURE THAT THERE IS NO DEFORMATION OR BEND
۱۴۷	MAKE SURE THAT THERE IS NO UNUSUAL SOUND GENERATED
۱۴۸	CHECK IF DEAD CENTER HAS BEEN FORMED CORRECTLY
۱۴۹	<b>INTERIOR OF OPERATING DEVICE BOX OF ISOLATOR</b>
۱۴۰	CHECK THE OPERATION OF AUX. SWITCH
۱۴۱	<b>MINIMUM OPERATING VOLTAGE TEST</b>
۱۴۲	MEASURE MINIMUM VOLTAGE WHICH PROVIDES PERFECT CLOSING AND OPENING IF NECESSARY
۱۴۳	<b>MANUAL SWITCHING TEST</b>
۱۴۴	<b>MEASUREMENT OF MANUAL OPERATION FORCE</b>
۱۴۵	MEASURE OPERATING FORCE REQUIRED FOR CLOSING AND OPENING IF NECESSARY
۱۴۶	END
۱۴۷	<b>UNIT TRANSFORMER PROPER</b>
۱۴۸	<b>PREP.</b>
۱۴۹	START
۱۵۰	SCAF. AROUND UNIT TRANSFORMER
۱۵۱	<b>BREATHING</b>
۱۵۲	CHECK THE DISCOLORATION OF SILICAGEL IN BREATHING
۱۵۳	REPLACE SILICAGEL
۱۵۴	SILICAGEL TANK BOTTOM GLASS CLEANING
۱۵۵	<b>ELECTRICAL TESTS ON COILES</b>
۱۵۶	COILES DC RESISTANCE CHECK ( LV SIDE )
۱۵۷	COILES DC RESISTANCE CHECK IN ALL TAP
۱۵۸	RATIO TEST ALL TAP WITH ANALOGUE AMMETER IN MA RANGE
۱۵۹	COILES INSULATION RESISTANCE CHECK AND PI TEST AND INSULATION RESISTANCE IN TWO DIFFERENT VOLTAGE
۱۶۰	TAG DELTA AND CAPACITANCE TEST FOR WINDING AND BUSHING BY OMICRON EQUIPMENT
۱۶۱	<b>OIL TESTS</b>
۱۶۲	MEASURE DIELECTRIC STRENGTH WITH OIL TESTER ( $> 40 \text{ kV}/2.5 \text{ MM GAP}$ ), BEFORE SHUT DOWN OF UNIT
۱۶۳	MEASURE MOISTURE CONTENT IN OIL WITH KARL-FISCHER METHOD ( $< 20 \text{ PPM}$ ), CLIENT MUST APPROVE SUBCONTRACTOR AND TEST CONDITION , BEFORE SHUT DOWN OF UNIT
۱۶۴	MEASURE ACID VALUE ( $< 0.2 \text{ MG KOH/G}$ ), INTERFACIAL TENSION (IFT) AND OIL POWER FACTOR , CLIENT MUST APPROVE SUBCONTRACTOR AND TEST CONDITION , BEFORE UNIT SHUT DOWN
۱۶۵	MEASURE - OIL GAS CHROMATOGRAPHY , CLIENT MUST APPROVE SUBCONTRACTOR AND TEST CONDITION , BEFORE SHUT DOWN OF UNIT
۱۶۶	<b>CONTROL PANEL &amp; TERMINAL BOX &amp; CABLES</b>
۱۶۷	CHECK THE WATER PROOFNESS OF ALL CONTROL WIRING CONNECTIONS
۱۶۸	ASCERTAIN THE TIGHTNESS OF ALL CONTROL WIRING CONNECTIONS
۱۶۹	ALL SWITCHES, LAMPS & ANNUNCIATION FUNCTION CHECK
۱۷۰	MEASURE INSULATION RESISTANCE OF CABLES WITH $500 \text{ V}$ MEGGER
۱۷۱	<b>ALARM CHECK</b>
۱۷۲	WINDING TEMP. HIGH
۱۷۳	WINDING TEMP. HIGH HIGH
۱۷۴	OIL TEMP. HIGH
۱۷۵	OIL TEMP. HIGH HIGH
۱۷۶	BUCHHOLZ RELAY ALARM
۱۷۷	BUCHHOLZ RELAY TRIP
۱۷۸	PRESS. RELIEF DEVICE VALVE (TRIP)
۱۷۹	<b>OUTSIDE CONNECTIONS</b>
۱۸۰	CHECK FOR DISCOLORATION
۱۸۱	ALL CONNECTION BOLT TIGHTENING CHECK

# کنترل پروژه تعمیرات اساسی واحد ۳



ID	Task Name
۱۸۳	INSPECT OF BUS DUCT
۱۸۳	<b>RADIATORS</b>
۱۸۴	Inspection of all surfaced body transfer oil leakage and repair it
۱۸۶	CLEANING OF ALL SURFACES
۱۸۷	REPAINTING OR TOUCH UP NECESSARY SECTIONS , (( ))
۱۸۸	<b>OTHER TRANSFORMERS</b>
۱۸۹	<b>A - UNIT BOILER AUX. TRANSFORMER ( AS TEST FORM )</b>
۱۹۰	OIL LEVEL OF TRANS AND OIL LEAKING CHECK
۱۹۱	BUSHING CHECKING AND CLEAN UP
۱۹۲	OIL INSULATION TEST (VOLTAGE TEST) , BEFORE SHUT DOWN OF UNIT
۱۹۳	MEASURE - OIL GAS CHROMATOGRAPHY , CLIENT MUST APPRVE SUBCONTRACTOR AND TEST CONDITION BEFORE SHUT DOWN OF UNIT
۱۹۴	OIL ACIDITY AND HUMIDITY TEST AND INTERFACIAL TENSION (IFT) AND OIL POWER FACTOR , CLIENT MUST APPRVE SUBCONTRACTOR AND TEST CONDITION , BEFORE SHUT DOWN OF UNIT
۱۹۵	INSPECTION OF SILICAGEL AND REPLACEMENT
۱۹۶	TIGHTING OF ALL CONNECTION
۱۹۷	BUCHHOLZ RELAY AND THERMAL RELAY CHECK (ALARM & TRIP)
۱۹۹	INSPECTION OF LV SIDE CT.
۲۰۰	COILES INSULATION RESISTANCE AND PI TEST AND INSULATION RESISTANCE IN TWO DIFFERENT VOLTAGE (LV-HV)
۲۰۱	INSULATION RESISTANCE CHECK OF CABLE ( LV-HV )
۲۰۲	RESISTANCE MEASUREMENT OF WINDING (LV SIDE)
۲۰۳	RESISTANCE MEASUREMENT OF WINDING (HV SIDE) FOR ALL TAP
۲۰۴	TAP CHANGER CONTINUE CHECK
۲۰۵	TRANS ABNORMAL ALARM CHECK
۲۰۶	CIRCUIT BREAKER TRIP ALARM CHECK
۲۰۷	Inspection of all surfaced body transformer , oil leakage and repair it
۲۰۸	oil adding of trans
۲۰۹	BODY CLEAN UP
۲۱۰	INPUT & OUTPUT CLEAN UP
۲۱۱	Ratio test for all tap
۲۱۲	<b>B - UNIT BOILER AUX. TRANSFORMER ( AS TEST FORM )</b>
۲۲۵	<b>A - UNIT TURBINE AUX. TRANSFORMER ( AS TEST FORM )</b>
۲۵۸	<b>B - UNIT TURBINE AUX. TRANSFORMER ( AS TEST FORM )</b>
۲۸۱	<b>A - UNIT COOLING TOWER AUX. TRANSFORMER ( AS TEST FORM )</b>
۳۰۴	<b>B - UNIT COOLING TOWER AUX. TRANSFORMER ( AS TEST FORM )</b>
۳۲۷	<b>STATION TRANSFORMER PROPER</b>
۳۲۸	<b>PREP.</b>
۳۲۹	SCAF. AROUND MAIN TRANSFORMER
۳۳۰	<b>BREATHER</b>
۳۳۱	CHECK THE DISCOLORATION OF SILICAGEL IN BREATHER
۳۳۲	REPLACE SILICAGEL
۳۳۳	SILICAGEL TANK BOTTOM OIL GLASS CLEANING
۳۳۴	<b>ELECTRICAL TESTS ON COILES</b>
۳۳۵	MEASUREMENT OF DYNAMIC RESISTANCE OF TAP CHANGER , CURRENT VS TIME GRAPH FOR EACH PHASE AND ANALYSIS OF TEST
۳۳۶	COILES DC RESISTANCE CHECK ( LV SIDE )
۳۳۷	COILES DC RESISTANCE CHECK IN ALL TAP AND RESISTANCE VS TAP POSITION GRAPH FOR EACH PHASE AND ANALYSIS OF TEST
۳۳۸	RATIO TEST WITH ANALOGUE AMMETER IN ۱۰۰ MA MAXIMUM RANGE
۳۳۹	COILES INSULATION RESISTANCE CHECK AND PI TEST AND INSULATION RESISTANCE IN TWO DIFFERENT VOLTAGE
۳۴۰	TAG DELTA AND CAPACITANCE TEST FOR WINDING AND BUSHING BY OMICRON EQUIPMENT
۳۴۱	<b>OIL TESTS</b>
۳۴۲	MEASURE DIELECTRIC STRENGTH WITH OIL TESTER ( > ۴۰KV/۲,۵ MM GAP)
۳۴۳	MEASURE MOISTURE CONTENT IN OIL WITH KARL-FISCHER METHOD ( < ۳۰ PPM ) , CLIENT MUST APPRVE SUBCONTRACTOR AND TEST CONDITION
۳۴۴	MEASURE - OIL GAS CHROMATOGRAPHY , CLIENT MUST APPRVE SUBCONTRACTOR AND TEST CONDITION
۳۴۵	MEASURE ACID VALUE ( < ۰,۲ MG KOH/G ) , INTERFACIAL TENSION (IFT) AND OIL POWER FACTOR , CLIENT MUST APPRVE SUBCONTRACTOR
۳۴۶	<b>CONSERVATOR</b>
۳۴۷	Inspection of all surfaced body transfer oil leakage and repair it
۳۴۹	OIL GAUGE GLASS OF CONSERVATOR CLEAN UP
۳۵۰	OIL DRAIN FOR GASKET & O-RING REPLACEMENT IF NECESSARY
۳۵۱	<b>FANS / PUMPS</b>
۳۵۲	<b>COOLING FANS</b>

## کنترل پروژه تعمیرات اساسی واحد ۳



ID	Task Name
۳۵۳	MEASURE INSULATION RESISTANCE IMMEDIATELY AFTER STOPPAGE OF FAN WITH A ۵۰۰V MEGGER ( > ۲ M)
۳۵۵	MEASURE DIFFERENTIAL CURRENT BETWEEN EACH PHASE ( < ۱۰٪)
۳۵۶	OBSERVATION OF RUNNING BEARING SOUND & MOTOR VIBRATION ( < ۰,۰۲ MM)
۳۵۷	DISASSEMBLE , INSPECTION , REPLACEMENT
۳۵۸	<b>OIL PUMPS</b>
۳۶۰	MEASURE INSULATION RESISTANCE IMMEDIATELY AFTER STOPPAGE OF PUMP WITH A ۵۰۰V MEGGER ( > ۱۰ M)
۳۶۱	MEASURE DIFFERENTIAL CURRENT BETWEEN EACH PHASE ( < ۱۰٪)
۳۶۲	OIL FLOW INDICATOR FOR EACH PUMP
۳۶۳	OBSERVATION OF RUNNING BEARING SOUND & MOTOR VIBRATION ( < ۰,۰۲ MM)
۳۶۴	DISASSEMBLE , INSPECTION , REPLACEMENT
۳۷۲	<b>CONTROL PANEL &amp; TERMINAL BOX &amp; CABLES</b>
۳۷۳	CHECK THE WATER PROOFNESS OF ALL CONTROL WIRING CONNECTIONS
۳۷۴	ASCERTAIN THE TIGHTNESS OF ALL CONTROL WIRING CONNECTIONS
۳۷۵	ALL SWITCHES, LAMPS & ANNUNCIATION FUNCTION CHECK
۳۷۶	MEASURE INSULATION RESISTANCE OF CABLES WITH ۵۰۰V MEGGER
۳۷۷	<b>ALARM CHECK</b>
۳۷۸	AC SUPPLY FAIL
۳۷۹	FAN MOTOR FAIL
۳۸۰	OIL TEMP. HIGH
۳۸۱	WINDING TEMP. HIGH
۳۸۲	WINDING TEMP. VERY HIGH
۳۸۳	OIL FLOW STOP
۳۸۴	PUMP MOTOR FAIL
۳۸۵	TR OIL LEVEL LOW
۳۸۶	OLTC OIL LEVEL LOW
۳۸۷	PRESS RELIEF DEVICE OPERATE
۳۸۸	OLTC PRESS HIGH
۳۸۹	OLTC DRIVE POWER FAILURE
۳۹۰	<b>OUTSIDE CONNECTIONS</b>
۳۹۱	CHECK FOR DISCOLORATION
۳۹۲	ALL CONNECTION BOLT TIGHTENING CHECK
۳۹۳	POWER CONNECTION ( INPUT & OUTPUT ) TIGHTENING CHECK
۳۹۴	BUSHING CT OUTPUT CONNECTIONS CHECK
۳۹۵	BUCHHOLZ RELAY OPERATION CHECK
۳۹۶	INSPECT OF BUS DUCT
۳۹۷	<b>RADIATORS</b>
۳۹۸	CLEANING OF ALL SURFACES
۳۹۹	REPAINTING OR TOUCH UP NECESSARY SECTIONS
۴۰۰	<b>SURGE ARRESTER</b>
۴۰۱	SURFACE POLLUTION CLEANING
۴۰۲	LEAKAGE CURRENT MEASUREMENT IF NECESSARY , BEFORE SHUT DOWN OF UNIT , RESISTIVE AND CAPACITIVE COMPONENT MEASUREMENT
۴۰۳	INSULATION RESISTANCE MEASUREMENT
۴۰۴	<b>FINAL ACTIVITIES</b>
۴۰۵	REMOVE SCAFF. AROUND MAIN TRANSFORMER
۴۰۶	END
۴۰۷	<b>STATION EARTHING SWITCHES</b>
۴۰۸	<b>SERVICING</b>
۴۰۹	<b>CONDUCTING PART</b>
۴۱۰	<b>CONTACT PART</b>
۴۱۱	CLEAN THE CONTACTING FACE
۴۱۲	CLEAN SEMI-SPHERICAL PROJECTION SURFACE OF FINGER ROOT
۴۱۳	BURN-OUT OR DEPOSITION REMOVAL & REMEDY ACTION
۴۱۴	REPLACE CONTACT SPRING, IF NECESSARY
۴۱۵	CLAMPING BOLTS TIGHTENING
۴۱۶	REPLACE ALL DAMAGED PARTS DUE TO THRUST DROP-OFF ,IF IT HAPPENED
۴۱۷	CHECK CONTACT POSITION DISCREPANCY & READJUST , IF NECESSARY
۴۱۸	<b>HINGE PART</b>
۴۱۹	CHECK THE DAMAGE & DEFORMATION & CORROSION OF LAMINATED FLEXIBLE CONDUCTOR
۴۲۰	CARRY OUT NECESSARY REPAIRMENT ,IF THERE IS ISOLATOR SWING
۴۲۱	TERMINAL SCREWS TIGHTENING
۴۲۲	TIGHTEN ALL LOOSE PARTS IF THERE IS ANY RUSTY
۴۲۳	<b>INSULATOR</b>

## کنترل پروژه تعمیرات اساسی واحد ۳



ID	Task Name
۴۲۴	CHECK INSULATION RESISTANCE ( > ۲۰۰۰ M)
۴۲۵	REPLACE INSULATOR ,IF NECESSARY
۴۲۶	INSULATOR SURFACE CLEANING
۴۲۷	TIGHTEN INSULATOR MOUNTING BOLTS & NUTS
۴۲۸	<b>BASE</b>
۴۲۹	<b>THRUST BEARING</b>
۴۳۰	CHECK SMOOTH MOVEMENT OF THRUST BEARING
۴۳۱	CLEAN & RUST TREATMENT THE THRUST BEARING
۴۳۲	REPLACE THRUST BEARING IF NECESSARY
۴۳۳	<b>INTER PHASE ROD CONNECTING PIN &amp; INTERPOLE PIPE CONNECTING PIN</b>
۴۳۴	CHECK FOR BENDING IN EACH PIN
۴۳۵	CHECK IF THERE IS ANY BROKEN OR CUTTED PIN
۴۳۶	CHECK FOR BEND IN INTER POLE PIPE
۴۳۷	<b>DRIVE BEARING FOR DRIVING DEVICE</b>
۴۳۸	CHECK SMOOTHLY ROTATING
۴۳۹	REPLACE DRIVE BEARING ,IF NECESSARY
۴۴۰	<b>APPEARANCE OF ISOLATOR</b>
۴۴۱	CHECK IF DEAD CENTER IS KEPT FORMED CORRECTLY
۴۴۲	<b>TESTS AFTER CHECK &amp; SERVICING</b>
۴۴۳	<b>POWER SWITCHING TEST</b>
۴۴۴	<b>RATED CONTROL VOLTAGE TEST</b>
۴۴۵	<b>CONDUCTING PART</b>
۴۴۶	START
۴۴۷	VISUAL CHECK FOR ANY ABNORMALITY ON OPERATION
۴۴۸	MEASURE THE OPERATING TIME TO MAKE CERTAIN THAT THE UNIT IS NORMAL
۴۴۹	VERIFY THAT THERE IS NO ABNORMALITY IN THE CONTACTING CONDITION AT CLOSING POSITION
۴۵۰	<b>BASE AND DRIVING DEVICE</b>
۴۵۱	BE SURE THAT THERE IS NO DEFORMATION OR BEND
۴۵۲	MAKE SURE THAT THERE IS NO UNUSUAL SOUND GENERATED
۴۵۳	CHECK IF DEAD CENTER HAS BEEN FORMED CORRECTLY
۴۵۴	<b>INTERIOR OF OPERATING DEVICE BOX OF ISOLATOR</b>
۴۵۵	CHECK THE OPERATION OF AUX. SWITCH
۴۵۶	<b>MINIMUM OPERATING VOLTAGE TEST</b>
۴۵۷	MEASURE MINIMUM VOLTAGE WHICH PROVIDES PERFECT CLOSING AND OPENING IF NECESSARY
۴۵۸	<b>MANUAL SWITCHING TEST</b>
۴۵۹	<b>MEASUREMENT OF MANUAL OPERATION FORCE</b>
۴۶۰	MEASURE OPERATING FORCE REQUIRED FOR CLOSING AND OPENING IF NECESSARY
۴۶۱	END
۴۶۲	FINISH